

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL  
RAILROAD AND FINANCIAL NEWSPAPER.

## Southern Mills Advance.

During the cotton year just closed, Southern Mills consumed forty-five per cent. of the American Cotton taken by the mills of this country. Ten years ago they consumed but twenty-three per cent. Their progress in a decade is marked by the following figures of bales of cotton consumed by them in comparison with the takings of Northern Mills

YEAR ENDED AUGUST 31.	SOUTHERN MILLS, BALES.	NORTHERN MILLS, BALES.	TOTAL BALES.
1892.....	686,080	2,190,766	2,876,846
1893.....	743,848	1,687,286	2,431,134
1894.....	718,515	1,601,173	2,319,688
1895.....	862,838	2,083,839	2,946,677
1896.....	904,701	1,600,271	2,504,972
1897.....	1,042,671	1,804,680	2,847,351
1898.....	1,231,841	2,211,740	3,443,581
1899.....	1,399,399	2,190,095	3,589,494
1900.....	1,597,112	2,068,300	3,665,412
1901.....	1,620,931	1,966,897	3,587,828

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VOL. XL.  
No. 8.

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Baltimore, September 12, 1901.



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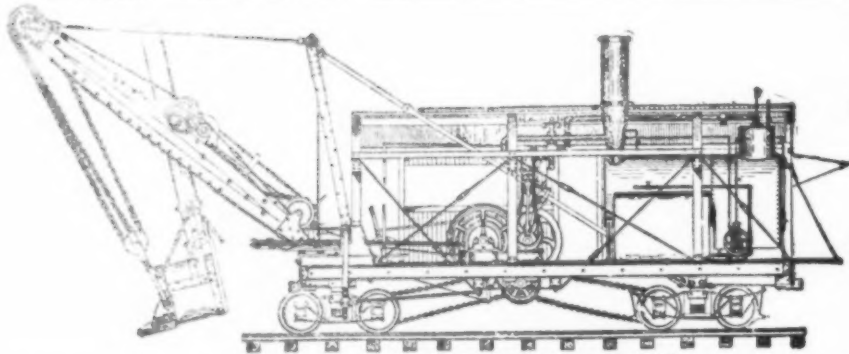
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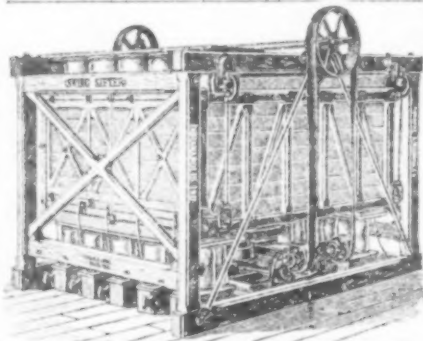
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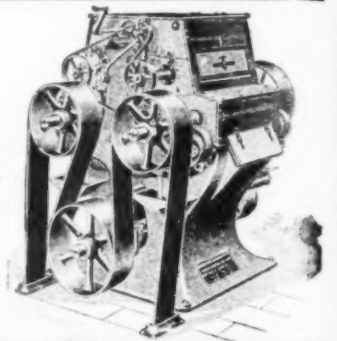
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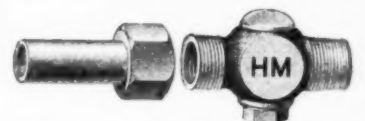
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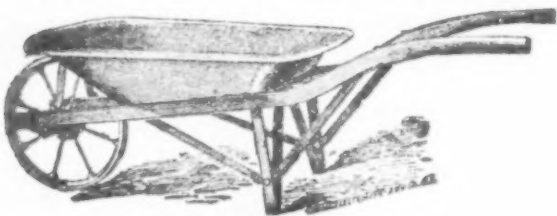
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Robertson Mfg. Co., James, Baltimore, Md.  
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Wood, R. D., & Co., Philadelphia, Pa.

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Morrison & Kindervater, Richmond, Va.  
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Farquhar Co., Ltd., A. B., York, Pa.  
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## Air Brakes.

Standard Traction Brake Co., New York, N. Y.

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McKiernan Drill Co., New York, N. Y.  
Rand Drill Co., New York, N. Y.  
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Fullwell-Bierce & Smith-Valle Co., Dayton, O.  
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Ryan, J. J., & Co., Chicago, Ill.

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Wheeler, McMichael & Co., Charlotte, N. C.

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Eureka Supply Co., Chattanooga, Tenn.  
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Lykes, John D., Birmingham, Ala.  
Sanders Mfg. Co., Dalton, Ga.  
Schreiber, L., & Sons Co., The Cincinnati, O.  
Virginia Bridge & Iron Co., Roanoke, Va.

## Asbestos.

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Kearney & Mattison Co., Ambler, Pa.  
Southern Asbestos Mfg. Co., Richmond, Va.

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Hanlon, Thos. F., Washington, D. C.

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## Babbitt Metal. (See Anti-Friction Metal.)

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Richmond Trust & Safe Deposit Co., Richmond, Va.  
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The only perfect spiral conveyor with continuous flight—no laps or rivets.

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Latrobe Steel & Coupler Co., Philadelphia, Pa.  
Safety Car Heating & Lighting Co., New York, N. Y.**Car Lighting and Heating.**  
Safety Car Heating & Lighting Co., New York, N. Y.**Car Seals.** (Lead.)  
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Sturtevant Co., B. F., Boston, Mass.  
West Pulverizing Machine Co., New York, N. Y.

## Dust-Collecting System.

Allington & Curtis Mfg. Co., Saginaw, E. S. Mich.  
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

## Dyeing Machinery.

Fairmount Machine Co., Philadelphia, Pa.  
Klauder-Weldon Co., Amsterdam, N. Y.

## Dynamite and Motors.

Alexander, Jr., Co., S. B., Charlotte, N. C.  
Commercial Electric Co., Indianapolis, Ind.  
Crocker-Wheeler Co., Ampere, N. J.  
General Electric Co., Schenectady, N. Y.  
Gregory Electric Co., Chicago, Ill.  
Guarantee Electric Co., Chicago, Ill.  
Kentucky Electric Co., Owensboro, Ky.  
McCay Engineering Co., Baltimore, Md.  
New Jersey Foundry & Machine Co., Plainfield, N. J.  
Northern Electric Mfg. Co., Madison, Wis.  
Ridgway Dynamo & Engine Co., Ridgway, Pa.  
Smith, Samuel J. & Co., Philadelphia, Pa.  
Smith, Samuel J. & Co., Charlotte, N. C.  
Sprague Electric Co., New York, N. Y.  
Stanley Electric Mfg. Co., Pittsfield, Mass.  
Tower-Binford Elec. & Mfg. Co., Richmond, Va.  
Triumph Electric Co., Cincinnati, O.  
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

## Eave Trough Hangers, etc.

Heartley Mch., Variety Iron &amp; Tool Works, Toledo, O.

## Electric Contractors.

Alexander, Jr., S. B., Co., Charlotte, N. C.  
Jenks, W. H., Richmond, Va.  
Northern Elec. Mfg. Co., Madison, Wis.  
Stanley Elec. Mfg. Co., Pittsfield, Mass.  
Tower-Binford Elec. & Mfg. Co., Richmond, Va.

## Electrical Instruments.

Bunnell, J. H. & Co., New York, N. Y.  
Northern Electric Supply Co., Madison, Wis.  
Stanley Electric Mfg. Co., Pittsfield, Mass.

## Electric-Light and Power Plants.

Alexander, Jr., Co., S. B., Charlotte, N. C.  
Commercial Electric Co., Indianapolis, Ind.  
Crocker-Wheeler Co., Ampere, N. J.  
General Electric Co., Schenectady, N. Y.  
General Incandescent Arc Light Co., New York, N. Y.  
Gregory Electric Co., Chicago, Ill.  
N. J. Foundry & Machine Co., Plainfield, N. J.  
Northern Electric Mfg. Co., Madison, Wis.  
Ridgway Dynamo & Engine Co., Ridgway, Pa.  
Smith, Samuel J. & Co., Philadelphia, Pa.  
Sprague Electric Co., New York, N. Y.  
Stanley Electric Mfg. Co., Pittsfield, Mass.  
Tower-Binford Elec. & Mfg. Co., Richmond, Va.  
Triumph Electric Co., Cincinnati, O.  
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

## Electric Railway Equipment.

Alexander, Jr., Co., S. B., Charlotte, N. C.  
General Electric Co., Schenectady, N. Y.  
Northern Electric Mfg. Co., Madison, Wis.  
Sprague Electric Co., New York, N. Y.  
Stanley Electric Mfg. Co., Pittsfield, Mass.  
Triumph Electric Co., Cincinnati, O.  
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.  
Western Electric Supply Co., St. Louis, Mo.

## Electrical Repairs.

Alexander, Jr., Co., S. B., Charlotte, N. C.  
General Incandescent Arc Light Co., New York, N. Y.  
Gregory Electric Co., Chicago, Ill.  
Guarantee Electric Co., Chicago, Ill.  
Kentucky Electric Co., Owensboro, Ky.  
Smith, Samuel J. & Co., Charlotte, N. C.  
Tower-Binford Elec. & Mfg. Co., Richmond, Va.

## Electrical Supplies.

Alexander, Jr., Co., S. B., Charlotte, N. C.  
Bunnell, J. H. & Co., New York, N. Y.  
General Electric Co., Schenectady, N. Y.  
Gregory Electric Co., Chicago, Ill.  
Guarantee Electric Co., Chicago, Ill.  
Jenks, W. H., Richmond, Va.  
Johns Mfg. Co., H. W., New York, N. Y.  
Kentucky Electric Co., Owensboro, Ky.  
McCay Engineering Co., Baltimore, Md.  
Northern Electric Mfg. Co., Madison, Wis.  
Smith, Samuel J. & Co., Charlotte, N. C.  
Stanley Electric Mfg. Co., Pittsfield, Mass.  
Sturtevant Co., B. F., Boston, Mass.  
Tower-Binford Elec. & Mfg. Co., Richmond, Va.  
Triumph Electric Co., Cincinnati, O.  
Western Electric Supply Co., St. Louis, Mo.  
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

## Electric Locomotives. (See Locomotive Bldrs.)

## Electric Trucks.

Baldwin Locomotive Works, Philadelphia, Pa.

## Electrotypers.

American Type Founders Co., Baltimore, Md.

## Elevators.

Albro-Clem Elevator Co., Philadelphia, Pa.  
Aultman Co., The Canton, O.  
Bartlett, Hayward & Co., Baltimore, Md.  
Bates, James, Sons, Baltimore, Md.  
Craig Ridgway Co., Coatesville, Pa.  
Curran, Jas. H., Elevator Co., Cincinnati, O.  
Eaton & Prince Co., Chicago, Ill.  
Fairmount Machine Co., Philadelphia, Pa.  
Faint Le Roy & Co., Baltimore, Md.  
Link-Belt Engineering Co., Philadelphia, Pa.  
Maryland Foundry & Machine Co., Baltimore, Md.  
Morse, Williams & Co., Philadelphia, Pa.  
Parkhurst Bros. & Co., Indianapolis, Ind.  
Park Mfg. Co., Charlotte, N. C.  
Spindel, J. G., Reading, Pa.  
Union Elevator & Machine Co., Chicago, Ill.  
Westbrooks, J. B., Fdry. & Mch. Co., Danville, Va.

## Elevator Buckets.

Caldwell, H. W., Son Co., Chicago, Ill.

## Elevator Enclosures and Cabs.

Balderson, H. & Son, Baltimore, Md.  
Bolles, J. E., Iron & Wire Works, Detroit, Mich.  
Dow Wire Work Co., Louisville, Ky.  
Dufur & Co., Baltimore, Md.  
Ludlow-Saylor Wire Co., The St. Louis, Mo.  
Myers Mfg. Co., The Fred J., Hamilton, O.

## Elevator Rope. [See Wire Rope.]

## Emery.

Carborundum Co., The Niagara Falls, N. Y.  
Scranton Corundum & Emery Wheel Co., Scranton, Pa.  
Tanite Co., The, Stroudsburg, Pa.

## Emery Wheels. [See Grinding and Polishing Machinery.]

## Engineers. (Electric, Consulting, Contracting Mechanical and Mining)

Alber & Byrne, Birmingham, Ala.  
Ridson-Alcott Turbine Co., Mount Holly, N. J.

Adams, Henry, Baltimore, Md.

American Bridge Co., New York, N. Y.

Blanton, Jr., E. A., Philadelphia, Pa.

Collier &amp; Brown, Atlanta, Ga.

Erikson, Edw. E., Pittsburg, Pa.

Given, Wm. M., Birmingham, Ala.

Hall, Charles &amp; Co., Mobile, Ala.

Hutton Engineering Co., Lexington, Va.

Kennedy, Walter, Pittsburg, Pa.

Lederle, Frank, Atlanta, Ga.

McRae, M. W., Atlanta, Ga.

Morrison &amp; Kindersater, Richmond, Va.

Nicol, Baur &amp; Foster, Mobile, Ala.

Northern Elec. Mfg. Co., Madison, Wis.

Perry, Nathaniel V., Atlanta, Ga.

Pratt &amp; Boltwood, Chapel Hill, N. C.

Pratt Laboratory, N. F., Atlanta, Ga.

Robinson Contracting Co., Geo. A., Mobile, Ala.

Stanley Elec. Mfg. Co., Pittsfield, Mass.

Thorburn Reid, New York, N. Y.

Tower-Binford Elec. &amp; Mfg. Co., Richmond, Va.

Virginia Bridge &amp; Iron Co., Roanoke, Va.

Witherow, Jas. F., Pittsburg, Pa.

## Engines.

Alexander, Jr., Co., S. B., Charlotte, N. C.

American Blower Co., Detroit, Mich.

Atlas Engine Works, Indianapolis, Ind.

Ball Engine Co., The Erie, Pa.

Ball &amp; Wood Co., New York, N. Y.

Boston Blower Co., Hyde Park, Mass.

Brownell, The, &amp; Co., Dayton, O.

Buffalo Forge Co., Buffalo, N. Y.

Cameron &amp; Barkley Co., Charleston, S. C.

Chicago House Wrecking Co., Chicago, Ill.

Farmer Co., A. B., Ltd., York, Pa.

Frick Co., Wayneboro, Pa.

Gibbs, W. H., &amp; Co., Columbia, S. C.

Greenwald Co., Cincinnati, O.

Hardie-Tynes Fdy. &amp; Mch. Co., Birmingham, Ala.

Harrisburg Fdry &amp; Mch. Works, Harrisburg, Pa.

High Point Machine Works, High Point, N. C.

Hill, Wm. E. &amp; Co., Kalamazoo, Mich.

International Power Co., Providence, R. I.

Lefel, James, &amp; Co., Springfield, O.

Lidgerwood Mfg. Co., New York, N. Y.

Lombard Iron Works &amp; Supply Co., Atlanta, Ga.

McClave, Hamilton &amp; Rimmer, New York, N. Y.

McIntosh, Seymour &amp; Co., New York, N. Y.

Murray Iron Works Co., Burlington, Iowa.

Necklenburg Iron Works, Charlotte, N. C.

Newport News Shipb'g &amp; Dry Dock Co., N. News, Va.

Phillips, Edward W., Baltimore, Md.

Phoenix Iron Works Co., Meadville, Pa.

Remington Machine Co., Wilmington, Del.

Ridgway Dynamo &amp; Engine Co., Ridgway, Pa.

Salem Iron Works, Winston-Salem, N. C.

Schofield, J. S., Sons Co., Macon, Ga.

Smith-Courtnay Co., Richmond, Va.

Southern Eng. &amp; Boiler Works, Jackson, Tenn.

Southwest Foundry &amp; Machine Co., Philadelphia, Pa.

St. Louis Iron &amp; Machine Works, St. Louis, Mo.

Struthers, Wells &amp; Co., Warren, Pa.

Sturtevant Co., B. F., Boston, Mass.

Union Iron Works Co., Selma, Ala.

Valk &amp; Murdoch Iron Works, Charleston, S. C.

Valley Iron Works, Williamsport, Pa.

Vilter Mfg. Co., Machine Works, St. Louis, Mo.

Wetherill, Robert, &amp; Co., Chester, Pa.

Westinghouse Machine Co., Pittsburg, Pa.

York Mfg. Co., York, Pa.

## Engines. (Gas and Gasoline.)

Blakeslee Mfg. Co., The Birmingham, Ala.

Columbus Machine Co., Columbus, O.

Cornell Machine Co., Chicago, Ill.

Fairbanks Co., Baltimore, Md.

Olds Motor Works, Detroit, Mich.

Otto Gas Engine Works, Philadelphia, Pa.

Struthers, Wells &amp; Co., Warren, Pa.

Westinghouse Machine Co., Pittsburg, Pa.

## Engines. (Oil.)

Aultman Co., The Canton, O.

## Engravers.

Alpha-Photo Engraver Co., Baltimore, Md.

## Exhaust Heads.

Bonar, James, &amp; Co., Pittsburg, Pa.

Burt Mfg. Co., Akron, O.

Sterling Blower &amp; Pipe Mfg. Co., Hartford, Conn.

## Exhausters.

Cornell, J. B. &amp; J. M., New York, N. Y.

## Expansion Bolts.

New Jersey Foundry &amp; Machine Co., Plainfield, N. J.

## Fans. (Electric Ceiling, Etc.)

Paragon Fan &amp; Motor Co., New York, N. Y.

## Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

## Fans. (Hand.)

Frantz-Gage Mfg. Co., The Chicago, Ill.

## Feed-Water Heaters and Purifiers.

Berryman, Jas., Philadelphia, Pa.

Bonar, James, &amp; Co., Pittsburg, Pa.

Gem City Boiler Co., Dayton, O.

Green Fuel Economizer Co., Mattewan, N. Y.

Harrison Safety Boiler Works, Philadelphia, Pa.

Harvey Down Draft Furnace Co., The Atlanta, Ga.

Kelley, Benj. F. &amp; Son, New York, N. Y.

National Pipe Bending Co., New Haven, Conn.

Park Mfg. Co., Charlotte, N. C.

Patterson, Frank L., New York, N. Y.

Phillips, E. W., Baltimore, Md.

Phoenix Iron Works Co., Meadville, Pa.

Scalfe, Wm. B. &amp; Son, Pittsburg, Pa.

Stillwell-Bierce &amp; Smith-Valle Co., Dayton, O.

Taunton Locomotive Mfg. Co., The Taunton, Mass.

Warren Webster Co., Camden, N. J.

## Feltling. (Hair.)

Baeder, Adamson &amp; Co., Philadelphia, Pa.

## Fencing. (Iron and Wire.)

Balderston, H. &amp; Son, Baltimore, Md.

Bolles Iron &amp; Wire Works, J. E., Detroit, Mich.

Burger Iron &amp; Wire Works Co., Akron, O.

Chandler Fence Co., Baltimore, Md.

Dow Wire Works Co., Louisville, Ky.

Dufur &amp; Co., Baltimore, Md.

Eureka Supply Co., Chattanooga, Tenn.

Ludlow-Saylor Wire Co., St. Louis, Mo.

New Jersey Wire Cloth Co., Trenton, N. J.

## Fertilizer Machinery. (See Phosphate Mch.)

## Files.

Barnett Co., G. &amp; H., Philadelphia, Pa.

Bealy, Chas. H. &amp; Co., Chicago, Ill.

Nicholson File Works, Providence, R. I.

## Filters. (Water.)

Hammond Iron Works, Warren, Pa.

Industrial Water Co., New York, N. Y.

Kennicott Water Softener Co., Chicago, Ill.

N. Y. Continental Jewell Filtration, New York, N. Y.

Scalfe, Wm. B. &amp; Son, Pittsburg, Pa.

Watson, N. A., Erie, Pa.

## Filters. (Oil.)

Bonar, James, &amp; Co., Pittsburg, Pa.

Burt Mfg. Co., The Akron, O.

Flower, Walter L. &amp; Co., St. Louis, Mo.

Textile Mill Supply Co., Charlotte, N. C.

## Filter Presses.

Johnson, J. &amp; Co., New York, N. Y.

Stillwell-Bierce &amp; Smith-Valle Co., Dayton, O.

## Fire-Brick.

Carolina Fire-Brick Works, Killian, S. C.

Garden City Sand Co., Chicago, Ill.

Pomona Terra Cotta Co., Pomona, N. C.

Powhatan Clay Mfg. Co., Richmond, Va.

Reese-Hammond Fire-Brick Co., Bolivar, Pa.

Stevens, H. &amp; Sons Co., Macon, Ga.

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**FIRE- FELT**  
 PURE ASBESTOS  
 REPLETE WITH AIR CELLS  
 STRONG, LIGHT, FLEXIBLE, EASILY APPLIED  
 MADE IN SECTIONS  
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 NEW YORK-CHICAGO-PHILADELPHIA-BOSTON  
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ESTABLISHED 1873.



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And VENTILATORS.

MADE OF SHEET METAL.

Proof against leaks from weather and condensation.

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**Value for Dollars**

Webster Feed Water Heater and Purifier

were paid in proportion to its value, the price would be many times higher than what we charge.

Many hundreds of buyers of the Webster Heaters have realized the return of anywhere from 15% to 75% per annum on their investments.

We issue a little book about the Webster Heater that ought to be convincing to any one who owns a steam plant.

**WARREN WEBSTER & CO.**  
 Manufacturers  
 CAMDEN, NEW JERSEY



## The Cold Wave Fan.

Patent applied for

Nothing  
to get out of  
order;  
no battery,  
no wires,  
no trouble.

The blades are adjustable, and the whole fan can be carried in the pocket without inconvenience. It is operated by opening and closing the hand in the same manner as one would use an ordinary curling iron.

The blades revolve at the speed of 4,000 revolutions per minute and will throw a strong current of air as far as an electric fan of the same size.

PRICE BY MAIL, \$1.50.

## The Frantz-Gage Mfg. Co.

85 Fifth Avenue,

Manufacturers of METAL SPECIALTIES. CHICAGO, ILL.

## CAROLINA FIRE BRICK WORKS,

KILLIAN, S. C.

Manufacturers of high-grade

## FIRE BRICK

of all shapes and sizes, and shippers of Fire Clay and Glass Sand. Correspondence solicited and prices quoted delivered anywhere.

## Actual Heating Capacity

and cost of running are the most important points to consider when you buy a heater. Include in the cost of running, fuel, time and labor and repairs. Expense, time and labor, are all saved (repairs are almost never needed) if you have a

## RICHMOND

## Steam or Hot Water HEATER.

And you get a greater volume and a greater uniformity of heat.

SEND FOR THE CATALOGUE.

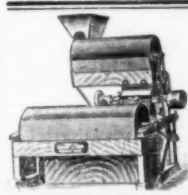
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NEW YORK, 1037-8 Park Row Building. BOSTON, 181 Tremont Street.  
PHILADELPHIA, 18-24 S. 7th Street.

## WE MAKE CHUCKS

The best in the market for foot lathes.  
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## DOUBLE THE VALUE OF YOUR COTTON SEED

by converting them into meal and hulls at the gin. Our PLANTATION COTTON-SEED HULLERS and SEPARATORS are doing this work to the satisfaction of hundreds of progressive farmers and stock raisers throughout the South. WHY NOT YOU? Can be run in connection with any gin or saw mill plant, and will hull the seed without delinting. Built in six different sizes. Capacity five to twenty-five tons of seed per day. Write for catalogue No. 5 AGENTS WANTED.

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## WATER SUPPLY CONTRACTORS.

## SYDNOR PUMP &amp; WELL CO.

INCORPORATED.

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Pawtucket, - R. I.  
Anderson, - Ind.  
Paterson, - N. J.  
Beaver Falls, Pa.  
Kent, - Ohio.

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ARCADE.  
GREAT WESTERN.  
KEARNEY & FOOT.  
AMERICAN.  
J. BARTON SMITH.  
McCLELLAN.  
EAGLE.  
"X. F."  
GOLD MEDAL.

SOLD  
ALL OVER  
THE WORLD.

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CONTROLLED  
BY THE

**NICHOLSON  
FILE CO.**

PROVIDENCE, R. I.,  
U. S. A.

**THE ENGINEERING WONDERS OF THE WORLD**  
"GIANT" PORTLAND CEMENT "THE OLD RELIABLE"



USED EXCLUSIVELY ON

THE CHIMNEY of the 96th Street Power House of the Metropolitan Street Railway, New York; height 353 feet. The highest chimney in the United States. (Eng. Record, December 17, 1898.)

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**HOFFMAN ROSENDALE,** One of the Best  
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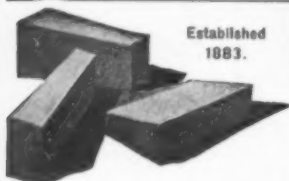
**MARYLAND CEMENT CO.**

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**Highest Grade Portland Cement.**

OFFICE: Builders' Exchange, Baltimore, Md.

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FIRE BRICK AND GENERAL  
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**LEHIGH  
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High Tensile Strength, Finely Ground,  
Light and Uniform in Color.

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**PORTLAND CEMENT.**

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IN CONCRETE**

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Proportions— { 2 parts bar sand.  
1 part cement. { 4 parts screenings (stone).  
{ 8 parts 1 1/2 inch stone.

Crushing test after 28 days **202 Tons per cubic foot.**  
Write **CHARLES WARNER COMPANY,**  
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**Ruggles-  
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FOR ALL MATERIALS,  
CONCENTRATES, LIME, SLAG, ROCK,  
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**SMOKE CONSUMERS**

are expensive and superfluous  
if you burn

**FALCON WHITE ASH  
MOSHANNON COAL.**

If a TON of it were the size  
of this page, the ASH it contains  
would be only as large as this ad.

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The COAL we sell for smithing purposes is not ordinary steam coal, but is a coal that was found to have the requisite qualities required for the forge. Then it is CRUSHED, SCREENED and WASHED. In this way all slate and sulphur is eliminated. The largest railroad companies in the South are using it in their shops, and many other shops in Mobile and elsewhere find it to be the best SMITHING COAL. Our price for it is very low in car load lots direct from mines.

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Specialties in Iron.  
**WRIGHTSVILLE  
HARDWARE CO.**  
Wrightsville, Pa.

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St. N.W., Washington, D. C. If you want to convert your business into a stock company, or want industrial plants of any kind to locate in your town, a charter and company organized, capital, officers, directors and practical men consult me.

Quality  
of  
Mixing  
Highest

Cost  
of  
Mixing  
Lowest

These two expressions comprehend all that is desirable—we might say, "the maximum of efficiency"—in a concrete mixer. Results—quality, quantity and cost of product—are what the engineer and contractor are after. A mixer that will turn out a product whose quality cannot be surpassed and in quantity greater than

that possible from other makes, and at a minimum of cost, is a pretty good machine to have, is it not? Such is the record maintained by the stationary and portable types of

**RANSOME CONCRETE MIXERS**

and it is upon such guarantee that they are sold.

"They are surely the greatest machines for the purpose ever invented."  
We are always glad to answer all inquiries and give any information desired.

**RANSOME & SMITH CO.,**

Designers and Manufacturers of Concrete Machinery,

19 NINTH STREET, BROOKLYN, N. Y.



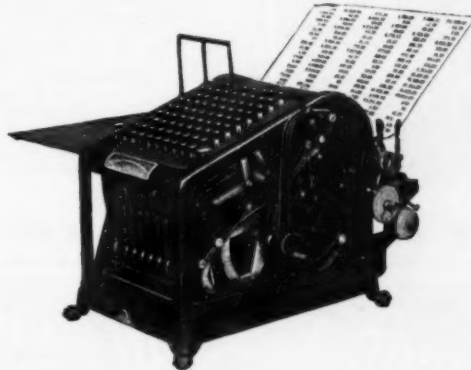
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 Dow Wire Works Co., Louisville, Ky.
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 Rockwell Engineering Co., New York.
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 Kennedy, Walter, Pittsburgh, Pa.  
 Meas & Fulton Iron Works, Birmingham, Ala.  
 Witherow, Jas. P., Pittsburgh, Pa.
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 Richmond Stone Co., Norwich, Conn.
- Furnaces.** (Metallurgical.)  
 Rockwell Engineering Co., New York, N. Y.
- Fuses.** (Wire Blocks, Fuses, etc.)  
 American Electric Fuse Co., Adrian, Mich.
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Rhoads, J. E., & Sons, Wilmington, Del.  
Schaefer, W. J., & Co., New York, N. Y.  
Textile Mill Supply Co., Charlotte, N. C.

**Paints.** (Cold Water, etc.)  
Bird & Co., J. A. & W., Boston, Mass.  
De Ronde, Co., Frank S., New York.  
Fairbanks Co., Baltimore, Md.  
Fox, M. Ewing, & Co., New York, N. Y.  
Muralo Co., New Brighton, Borough of Richmond, N. Y.  
Muzzy Bros., Paterson, N. J.  
Troy Cold Water Kalsomine Co., Troy, N. Y.

**Paints.** (Roofing, etc.)  
Armstrong Mfg. Co., The, Richmond, Va.  
Barrett Mfg. Co., Philadelphia, Pa.  
Chattanooga Paint Co., Chattanooga, Tenn.  
Colonial Paint & Varnish Co., Cleveland, O.  
Detroit Graphite Mfg. Co., Detroit, Mich.  
Dixon Crucible Co., Joseph, Jersey City, N. J.  
Eastern Granite Roofing Co., Jersey City, N. J.  
French, Samuel H. & Co., Philadelphia, Pa.  
Garfield Oil Co., Cleveland, O.  
Johns Mfg. Co., H. W., New York, N. Y.  
Standard Paint Co., New York, N. Y.

**Painting Machinery.**  
Muralo Co., New Brighton, Borough of Richmond, N. Y.  
Star Brass Works Co., The, Chicago, Ill.

**Paper.** (Roofing, Building, Sheathing, etc.)  
Armstrong Mfg. Co., The, Richmond, Va.  
Barrett Mfg. Co., Philadelphia, Pa.  
Eastern Granite Roofing Co., Jersey City, N. J.  
Garrett, C. S., & Son, Philadelphia, Pa.  
National Roofing & Supply Co., Louisville, Ky.  
Standard Paint Co., The, New York, N. Y.

**Paper.** (Sand Emery.)  
Rader, Adamson & Co., Philadelphia, Pa.

**Parquetry.**  
Adams, J. M., Baltimore, Md.

**Patterns.** (Metal.)  
Ryan, J. J., & Co., Chicago, Ill.

**Paving Materials.**  
Charlotte Roofing & Paving Co., Charlotte, N. C.  
National Roofing & Supply Co., Louisville, Ky.  
Robinson Contracting Co., Geo. A., Mobile, Ala.  
Warren-Ehret Co., Philadelphia, Pa.

**Perforated Metal.**  
Atchison Perforated Metal Co., Robert, Chicago, Ill.  
Bealy, Chas. H., & Co., Chicago, Ill.  
Harrington & King Perforating Co., Chicago, Ill.  
Hendrick Mfg. Co., The, Ltd., Carbondale, Pa.  
Littleford Bros., Cincinnati, Ohio.  
Ludlow-Saylor Wire Co., St. Louis, Mo.  
Mundt, Charles, & Sons, New York, N. Y.

**Phosphate Machinery.**  
Aising Co., J. R., Inc., Brooklyn, N. Y.  
Aultman Co., The, Canton, O.  
Bailey-Libbey Co., The, Charleston, S. C.  
Bradley Pulverizer Co., Boston, Mass.  
Cameron & Barkerley Co., Charleston, S. C.  
Cresson Co., Geo. V., New York, N. Y.  
Foss Mfg. Co., Springfield, O.  
Link-Belt Engineering Co., Philadelphia, Pa.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Raymond Bros. Impact Pulverizer Co., Chicago, Ill.  
Vaik & Murdock Iron Works, Charleston, S. C.  
Walker & Elliott, Wilmington, Del.  
West Pulverizing Machine Co., New York, N. Y.

**Phosphate Screens.** [See Screens.]

**Phosphor Bronze.** (Wire, Rods, Sheets.)  
Ryan, J. J., & Co., Chicago, Ill.

**Phosphor Bronze Smelting Co., Ltd., Philadelphia, Pa.**

**Pig Iron.**  
Alabama Coal & Iron Co., Birmingham, Ala.

**Piling.**  
New Orleans Wood Preserving Wks., New Orleans, La.

**Pillow Blocks.**  
Dodge Mfg. Co., Milwaukee, Ind.  
Cresson Co., Geo. V., New York, N. Y.  
Golden's Foundry & Machine Co., Columbus, Ga.

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Dimmick Pipe Co., Birmingham, Ala.  
General Fire Extinguisher Co., Providence, R. I.  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
U. S. Cast Iron Pipe & Foundry Co., Chattanooga, Tenn.  
Wood, R. D., & Co., Philadelphia, Pa.

**Pipe.** (Coll.)  
National Pipe Bending Co., New Haven, Conn.  
Simmons, John, Co., New York, N. Y.  
Wolf Co., Fred. W., Chicago, Ill.

**Pipe.** (Cut, Threaded, etc.)  
Simmons, John, Co., New York, N. Y.

**Pipe.** (Lead.)  
Robertson Mfg. Co., James, Baltimore, Md.

**Pipe.** (Straight Riveted.)  
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

**Pipe.** (Spiral Riveted.)  
Abendroth & Root Mfg. Co., New York, N. Y.  
American Spiral Pipe Works, Chicago, Ill.

**Pipe.** (Sewer and Culvert.)  
Pomona Terra Cotta Co., Pomona, N. C.  
Stevens' Sons Co., H., Macon, Ga.  
Warner Co., Chas., Wilmington, Del.

**Pipe.** (Wrought Iron.)  
Davis, The John Co., Chicago, Ill.  
Fairbanks Co., Baltimore, Md.  
General Fire Extinguisher Co., Providence, R. I.

**Pipe.** (Unions and Joint.)  
Dart Mfg. Co., E. M., Providence, R. I.

**Pipe Cutting and Threading Mach.**  
Columbus Machine Co., Columbus, O.  
Saunders' Sigsbee, D., Yonkers, N. Y.

**Pipe Fittings.**  
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General Fire Extinguisher Co., Providence, R. I.  
Robertson Mfg. Co., James, Baltimore, Md.  
Wolf Co., Fred. W., Chicago, Ill.

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Atlas Pipe Wrench Co., New York, N. Y.  
Williams, J. H., & Co., Brooklyn, N. Y.

**Planers.**  
American Tool Works Co., Cincinnati, O.

**Plantation Locomotives.** (See Locomotive Builders.)

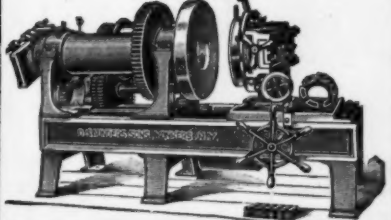
**Plaster Ornaments.**  
French, Samuel H., & Co., Philadelphia, Pa.

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Hanson & Van Winkle Co., Newark, N. J.

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Hill & Griffith Co., Cincinnati, O.  
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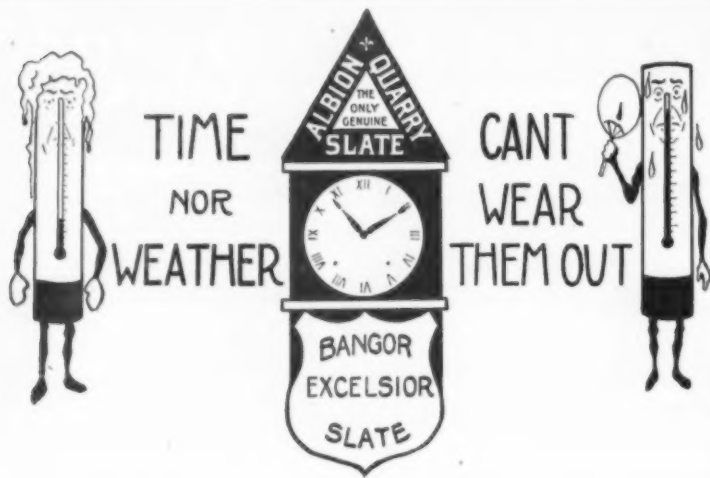
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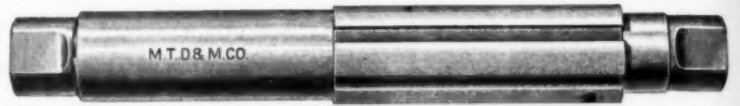
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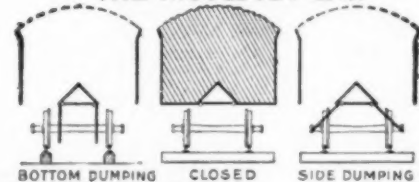
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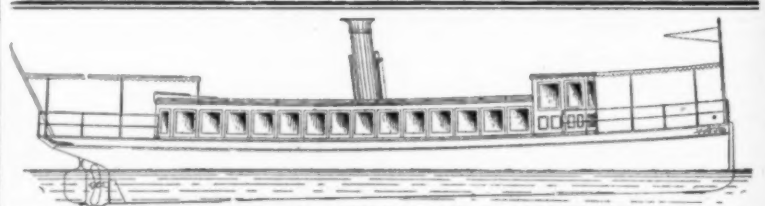
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Hosford Pneumatic Tube Co., Chicago, Ill.**Power Transmission Machinery.**Caldwell, H. W., & Son Co., Chicago, Ill.  
Crescent Co., Geo. V., New York, N. Y.  
Dehner-Wuepel Mill Building Co., St. Louis, Mo.  
Dodge Mfg. Co., Milwaukee, Ind.  
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Fairmount Machine Co., Philadelphia, Pa.  
Hunt Co., C. W., New York, N. Y.  
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Northern Electric Mfg. Co., Madison, Wis.  
Stanley Electric Mfg. Co., Pittsfield, Mass.  
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Valk & Hurdock Iron Works, Charleston, S. C.  
Wilson-Stillman Co., New York, N. Y.**Presses.** (Stamping.)Lester, Chas. & Co., Brooklyn, N. Y.  
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Dodge Mfg. Co., Milwaukee, Ind.  
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Whitman Mfg. Co., New York, N. Y.  
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Dawson, A. L., & Co., Chicago, Ill.  
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Eckhold's Sons, Wm., Philadelphia, Pa.  
Fairbanks Co., Baltimore, Md.  
Ohio Pulley Co., Marion, O.  
Saginaw Mfg. Co., Saginaw, Mich.**Rollers.** (Pneumatic.)

Williams, Milton F., &amp; Co., St. Louis, Mo.

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Kgan Co., The Cincinnati, O.  
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Fairmount Machine Co., Philadelphia, Pa.  
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Finished Steel Co., The, Youngstown, O.  
Golden's Foundry & Machine Co., Columbus, Ga.  
Greenwald Co., I. & E., Cincinnati, O.  
Jeffrey Mfg. Co., The, Columbus, O.  
Lane Mfg. Co., Montpelier, Vt.  
Link-Belt Engineering Co., Philadelphia, Pa.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Maryland Foundry & Machine Co., Baltimore, Md.  
Morgan Smith Co., S. York, Pa.  
Nortley & Marmon Co., Indianapolis, Ind.  
Rhoads, J. R., & Sons, Wilmington, Del.  
Scholfield, J. S., Sons Co., Macon, Ga.  
Stillwell-Bierce & Smith-Valle Co., Dayton, O.  
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Valley Iron Works, Williamsport, Pa.  
Wickes Bros., Pittsburgh, Pa.  
Wolf Co., Chambersburg, Pa.  
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Ingersoll-Sergeant Drill Co., New York, N. Y.**Pumps.** (Centrifugal.)Southark Foundry & Machine Co., Philadelphia, Pa.  
Wood & Co., R. D., Philadelphia, Pa.**Pumps.** (Power Roller-Feed.)Cameron Steam Pump Works, A. S., New York, N. Y.  
McGowan Co., John H., Cincinnati, O.  
Park Mfg. Co., Charlotte, N. C.  
Watson, N. A., Erie, Pa.**Pumps.** (Steam.)Cameron Steam Pump Works, A. S., New York, N. Y.  
Cameron & Barkley Co., Charleston, S. C.  
Cook Well Co., St. Louis, Mo.  
Dean Bros. Steam Pump Works, Indianapolis, Ind.  
Downs Pump Co., Downsville, Pa.  
Gardner Governor Co., Quincy, Ill.  
Mason Regulator Co., Boston, Mass.  
McGowan, John H., & Co., Cincinnati, O.  
Pulmoner Steam Pump Co., New York, N. Y.  
Stillwell-Bierce & Smith-Valle Co., Dayton, O.  
Sydney Pump & Well Co., Richmond, Va.  
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Dean Bros., Indianapolis, Ind.  
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Mason Regulator Co., Boston, Mass.**Punching and Shearing Machinery.**American Tool Works Co., Cincinnati, O.  
Bertsch & Co., Cambridge City, Ind.  
Long & Allistatter Co., Hamilton, O.  
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Robinson, J. M., & Co., Cincinnati, O.  
Rogersford Foundry & Machine Co., Rogersford, Pa.  
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Jeffrey Mfg. Co., Columbus, O.  
Rand Drill Co., New York, N. Y.  
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Fitz-Hugh & Co., Chicago, Ill.  
Grant & Williams, New York, N. Y.  
Hyslop Bros. & Co., Pittsburgh, Pa.  
Johns Mfg. Co., H. W., New York, N. Y.  
Jones, J. B., & Co., Allegheny, Pa.  
Joseph Iron Co., Isaac, Cincinnati, O.  
Kilby Locomotive & Machine Works, Ansonia, Ala.  
Males Co., Cincinnati, O.  
Miller Supply Co., Huntington, W. Va.  
May & Spaulding, Atlanta, Ga.  
New York Equipment Co., New York, N. Y.  
Pittsburgh Locomotive & Car Works Co., Pittsburgh, Pa.  
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Poulter & Co., Philadelphia, Pa.  
Robinson & Orr, Pittsburgh, Pa.  
Southern Iron & Equipment Co., Atlanta, Ga.  
Steel Rail Supply Co., The, New York, N. Y.  
Watson, Benj., New York, N. Y.  
Weir Frog Co., Cincinnati, O.  
Zelnicke, W. A., St. Louis, Mo.**Rails.** (Steel.)Males Co., Cincinnati, O.  
Steel Rail Supply Co., The, New York, N. Y.**Reamers.**Brubaker, W. L., & Bros., Millersburg, Pa.  
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Austin Mfg. Co., F. C., Harvey, Ill.  
Bunnell Machinery Co., Chicago, Ill.  
Kelly Co., O. S., Springfield, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.**Roofing.** (Felt, Tar, Asphalt, Paper, etc.)Armstrong Mfg. Co., The, Richmond, Va.  
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Barrett Mfg. Co., Philadelphia, Pa.  
Charlotte Roof & Paving Co., Charlotte, N. C.  
Eastern Granite Roofing Co., Jersey City, N. J.  
Garrett, C. S., & Son, Philadelphia, Pa.  
Johns Mfg. Co., H. W., New York, N. Y.  
National Roofing & Supply Co., Louisville, Ky.  
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Stowell Mfg. Co., Jersey City, N. J.  
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Downman Mfg. Co., Atlanta, Ga.  
Merchant & Co., Philadelphia, Pa.  
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Virginia Bridge & Iron Co., Roanoke, Va.**Roofing and Siding.** (See Roofing.)**Roofing.** (Metal Shingles.)Corright Metal Roofing Co., Philadelphia, Pa.  
Merchant & Co., Inc., Philadelphia, Pa.  
Montross Metal Shingle Co., Camden, N. J.**Roofing.** (Slate.)Downman Mfg. Co., Atlanta, Ga.  
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Genuine Bangor Slate Co., Easton, Pa.  
McKenna, David, Slattington, Pa.  
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Merchant & Co., Inc., Philadelphia, Pa.  
Robinson, J. M., & Co., Cincinnati, O.**Ropes.** (Transmission.)American Mfg. Co., The, New York, N. Y.  
Carpenter & Co., George B., Chicago, Ill.  
Crescent Co., Geo. V., New York, N. Y.  
Dodge Mfg. Co., Milwaukee, Ind.  
Hunt Co., C. W., West New Brighton, N. Y.  
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Link-Belt Engineering Co., Philadelphia, Pa.  
Macomber & Whyte Rope Co., Chicago, Ill.  
Morgan Smith Co., S. York, Pa.  
Robinson Machine Co., Monongahela, Pa.  
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Crosby Steam Gauge & Valve Co., Boston, Mass.  
Davis, The John Co., Chicago, Ill.  
Lunkenheimer Co., Cincinnati, O.  
Reliance Gauge Column Co., Cleveland, O.  
Wright Mfg. Co., Detroit, Mich.**Saws.** [See Woodworking Machinery.]Atkins, E. C., & Co., Indianapolis, Ind.  
Barnes Co., W. F. & John, Rockford, Ill.  
Huther Bros., Rochester, N. Y.**Saw-Mill Machinery.**Alabama Iron Works, Mobile, Ala.  
Bailey-Lebby Co., The, Charleston, S. C.  
Beach, H. W., Montrose, Pa.  
Cameron & Barkley Co., Charleston, S. C.  
DuBois Iron Works, DuBois, Pa.  
Deouch Mill Mfg. Co., Atlanta, Ga.  
Egan Co., The, Cincinnati, O.  
Farquhar Co., A. B., Ltd., York, Pa.  
Fay, J. A., & Co., Cincinnati, O.  
Florida Iron & Wood Works, Apopka, Fla.  
Frick Co., Waynesboro, Pa.  
Hench & Dromgold, York, Pa.  
Lane Mfg. Co., Montpelier, Vt.  
Mecklenburg Iron Works, Charlotte, N. C.  
Salem Iron Works, Winston-Salem, N. C.  
Sanders Mfg. Co., Dalton, Ga.  
Scholfield, J. S., Sons Co., Macon, Ga.  
Soule Steam Feed Works, Meridian, Miss.  
Southern Eng. & Boiler Works, Jackson, Tenn.  
Union Iron Works Co., Selma, Ala.  
Wickes Bros., Pittsburgh, Pa.**Saw Sharpeners and Files.** (Cotton Gin.)

Carrver Cotton Gin Co., East Bridgewater, Mass.

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Standard Scale & Supply Co., Ltd., Pittsburg, Pa.**Schools and Colleges.**

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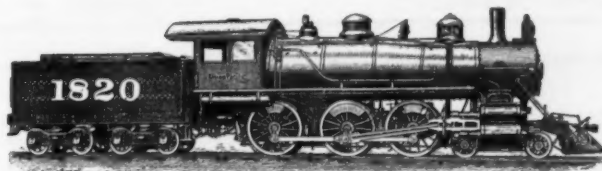
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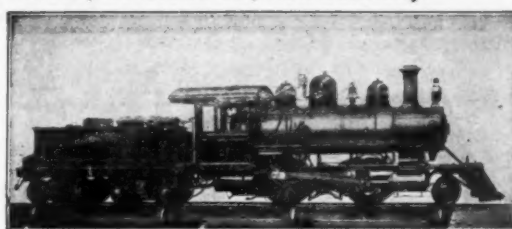
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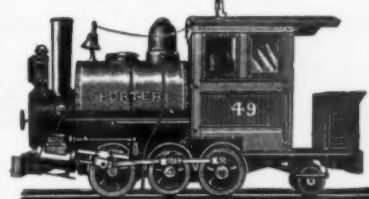
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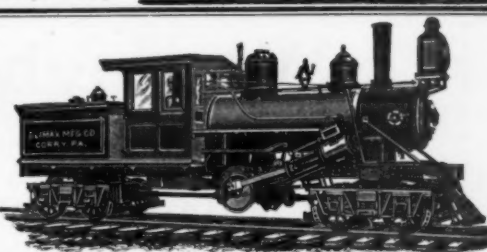
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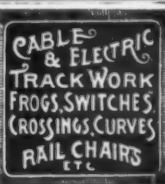
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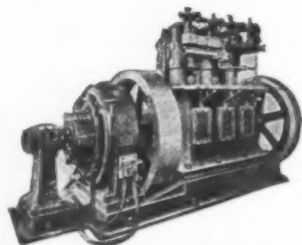
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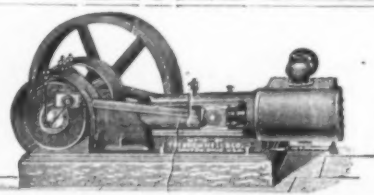
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Allington & Curtis Mfg. Co., Saginaw, Mich.  
 Sterling Blower & Pipe Mfg. Co., Hartford, Conn.  
 Sturtevant Co., B. F., Boston, Mass.

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 Harrison Safety Boiler Works, Philadelphia, Pa.  
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American Tool Works Co., Cincinnati, O.

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## Sheet Steel and Iron.

American Sheet Steel Co., New York, N. Y.

## Shingle, Lath and Slave Machinery.

(See Woodworking Machinery.)

Lane Mfg. Co., Montpelier, Vt.  
 Trevor Mfg. Co., Lockport, N. Y.

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Newport News Shipbuilding & Dry Dock Co., Newport News, Va.

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 Noerden Co., E. Van, Boston, Mass.

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 David McKenna, Stratford, Pa.  
 Williams, J. R., & Co., Arvonia, Va.

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 Keeler, E., Co., Williamsport, Pa.  
 Littleford Bros., Cincinnati, Ohio.  
 Schofields, J. S., Sons Co., Macon, Ga.  
 York Mfg. Co., York, Pa.

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Mecklenburg Iron Works, Charlotte, N. C.

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 Hartley Boiler Works, Montgomery, Ala.  
 Keeler Co., E., Williamsport, Pa.  
 Means & Fulton Iron Works, Birmingham, Ala.  
 Virginia Bridge & Iron Co., Roanoke, Va.  
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 Vaik & Murdoch Iron Works, Charleston, S. C.  
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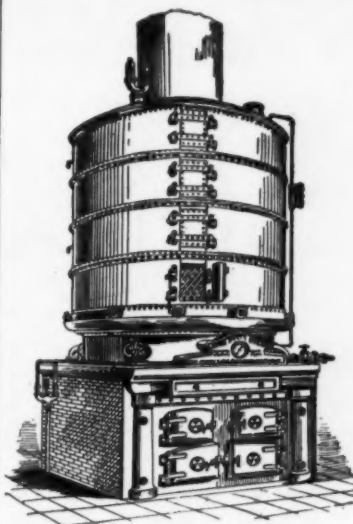
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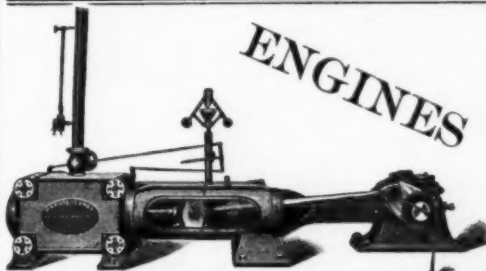
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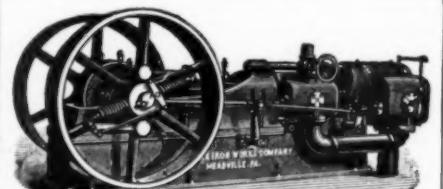
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 "Light & Heavy Blacksmith Forgings solicited."

**THE MIETZ & WEISS**  
 Kerosene and Gas Engine.  
*Cheapest power known.*  
 Burns Kerosene. Self-igniting. Simplest engine built. Automatic, simple and reliable. For all power purposes including pumping and electric lighting. See for Catalogue.  
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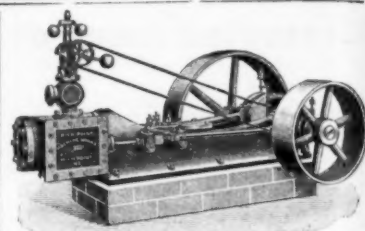
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 ...BUILDERS...

**Dick & Church Automatic Cut-Off Engines**

Simple,  
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 Triple  
 Expansion.  
  
 Belted,  
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 50 to 800  
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**HIGH GRADE BOILERS OF VARIOUS TYPES.**  
*Complete Power Plants a Specialty.*  
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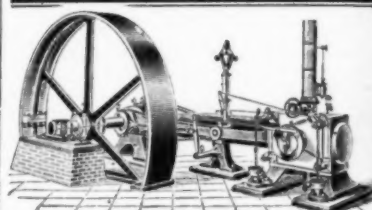
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 Engineers, Founders, Machinists and Millwrights.  
**Steam Engines,**  
 Shafting, Hangers, Pulleys,  
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 Headquarters for Mill Gearing  
 of all kinds and sizes. Steam  
 Power Plan's Complete.  
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Manufactured in Nine Sizes—  
 5 to 50 Horse Power.  
**HIGH POINT MACHINE WORKS,**  
 HIGH POINT, N. C.

**SMITH-COURTNEY CO.**  
 Richmond, Va.

SOUTHERN AGENTS FOR THE  
**Improved Bates Corliss Engine**  
 FROM 50 TO 1000 HORSE-POWER.  
 THE ENGINE for Cotton Mills and Large  
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 Also full line of Engines, Boilers, Iron and  
 Woodworking Machinery and Pumps. Largest  
 stock of Railroad, Mine and Mill Supplies in the  
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Corliss, Slide Valve & Hoisting Engines,  
 BOILERS OF ALL STYLES AND SIZES.  
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**Gas and Gasoline Engines**  
 embody new and  
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 Send for catalogue "G."  
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 Engines  
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 Threshing Machinery.  
 Send for Illustrated Catalogue.  
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## Classified Index of Advertisers.

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Bacon Air Lift Co., New York, N. Y.  
Cook Well Co., St. Louis, Mo.  
Gould, F. M., Richmond, Va.  
Hughes Specialty Well Drilling Co., Charleston, S. C.  
Sydney Pump & Well Co., Inc., Richmond, Va.

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Austin Mfg. Co., F. C. Harvey, Ill.  
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Gould, F. M., Richmond, Va.  
Hughes Specialty Well Drilling Co., Charleston, S. C.  
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**Whistles.** (Chimes, Sirens, etc.)

American Steam Gauge Co., Jamaica Plain, Mass.

Crosby Steam Gauge &amp; Valve Co., Boston, Mass.

Lankenheimer Co., Cincinnati, O.

**White Lead.**

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**Windmills.**

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**Window Guards.** (Wire.) [See Wire Goods.]**Window Frames & Sashes.** (Metallic.)

Bader, R. B., &amp; Sons, Boston, Mass.

Smith-Warren Co., East Cambridge, Mass.

**Wire Cloth.** (Iron, Steel, Brass, etc.)

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**Wire Goods.**

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Dufur &amp; Co., Baltimore, Md.

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Meyers Mfg. Co., The Fred J., Hamilton, O.

New Jersey Wire Cloth Co., Trenton, N. J.

**Wire Netting.**

Chandler Fence Co., Baltimore, Md.

New Jersey Wire Cloth Co., Trenton, N. J.

**Wire Rope Thimbles.**

Jackson Mfg. Co., Harrisburg, Pa.

**Wire, Barbed Wire, etc.**

Besly, Chas. H., &amp; Co., Chicago, Ill.

Ludlow-Saylor Wire Co., The, St. Louis, Mo.

**Wire Rope.**

Contractors' Plant Mfg. Co., Buffalo, N. Y.

Fairbanks Co., Baltimore, Md.

Hazard Mfg. Co., Wilkes Barre, Pa.

Leach, A., &amp; Sons Rope Co., St. Louis, Mo.

Lidgerwood Mfg. Co., New York, N. Y.

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Roebbing's, John A., Sons Co., Trenton, N. J.

Trenton Iron Co., Trenton, N. J.

**Wire-Rope Tramways.** [See Tramways.]**Wrenches.** (Drop Forged.)

Atlas Pipe Wrench Co., New York, N. Y.

Williams, J. H., &amp; Co., Brooklyn, N. Y.

**Woodsplitting Machines.**

Trevor Mfg. Co., Lockport, N. Y.

**Woodworking Machinery.**

Chattanooga Machinery Co., Chattanooga, Tenn.

Chicago Knife Works, Chicago, Ill.

Coe Mfg. Co., The, Fairview, O.

Cordesman, Meyer &amp; Co., Cincinnati, O.

DeLoach Mill Mfg. Co., Atlanta, Ga.

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Egan Co., The, Cincinnati, O.

Fay, J. A., &amp; Co., Cincinnati, O.

Frank Machinery Co., The, Buffalo, N. Y.

Gibbs, W. H., &amp; Co., Columbia, S. C.

Greaves, Klusman &amp; Co., Cincinnati, O.

Huther Bros., Rochester, N. Y.

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Root, B. M., York, Pa.

Salem Iron Works, Winston-Salem, N. C.

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Smith Machine Co., H. B., Smithville, N. J.

Trevor Mfg. Co., Lockport, N. Y.

**Zinc.**

Merchant &amp; Co., Inc., Philadelphia, Pa.

New Jersey Zinc Co., New York, N. Y.

WE DRY BOTH SIDES THE EARTH

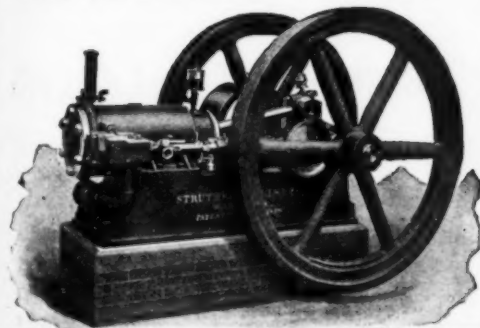
Bananas in  
JAPAN  
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Lumber in  
NORWAY  
Ginger in  
JAMAICA  
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CALIFORNIA  
Brick in  
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and everything everywhere

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DETROIT, MICH.

NEW YORK CHICAGO LONDON  
141 Broadway 1000 Broadway 1000 Broadway

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SIMPLE.  
ECONOMICAL.  
DURABLE.

MANUFACTURED BY

Struthers, Wells &amp; Co.

WARREN, PA.

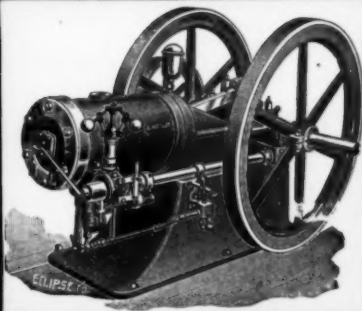
N. Y. Office, 26 Cortlandt St.  
Phila. Office, Fidelity Mutual Bldg.  
Baltimore Office, 110 S. Howard St.

OUR EXHIBIT at the PAN-AMERICAN occupies SPACE 42, Machinery and Transportation Bldg. Besides our regular line, we show two or three NEW productions. It is a LIVE EXHIBIT and worth a visit. LOOK FOR US at BUFFALO.

THE OTTO GAS ENGINE WORKS,  
PHILADELPHIA, PA.

Representatives for Virginia and the Carolinas, SMITH-COURTNEY CO., RICHMOND, VA.

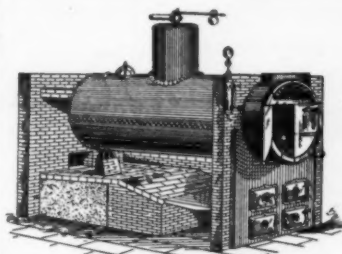
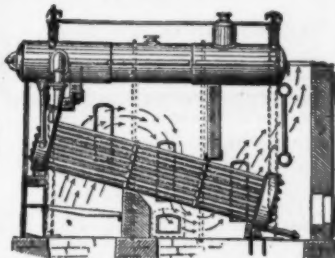
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SIMPLE  
ECONOMICALRELIABLE  
DURABLESEND A POSTAL FOR  
OUR BOOKLET.THE BLAKESLEE CO.  
BIRMINGHAM, ALA., U. S. A.HAMMOND  
Water-Tube Boiler,

The Most Economical Boiler Made.

All parts interchangeable and easily removed and replaced. The only Water Tube Boiler connected to the steam drum at one end only.  
Send for Illustrated Catalogue.

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Tanks,**

Injectors, Inspirators,  
Saw Mill Machinery,  
Shafting, Pulleys,  
Hangers, Etc.

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BEST ON THE MARKET.

We furnish complete equipments for Burning Oil—the new fuel for the South and West. We manufacture

**BOILERS, TANKS**  
of any size for any purpose.  
**STACKS AND STANDPIPES.**

The Petroleum Iron Works Co.

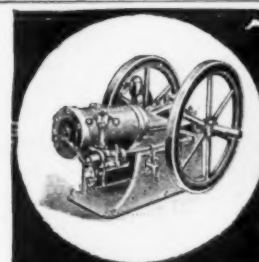
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Branch—Corsicana, Texas.

**BOILERS, TANKS, PENSTOCKS,  
FEED WATER HEATERS,**

General Steel Plate Construction.

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GASOLINE ENGINE  
STANDS SUPREME  
LET US TELL YOU WHY  
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10 K. W.—500 K. W.

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10 H. P.—1000 H. P.

For every service

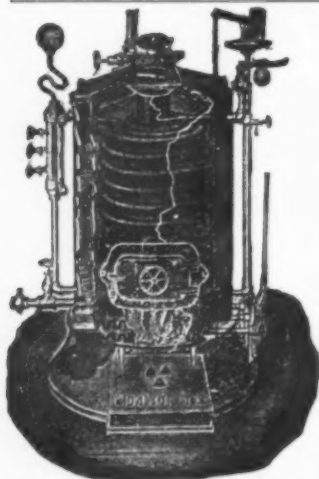
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HAMILTON &  
RIMMER,**

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Builders of Stand Pipes, Tanks, Stacks, Ore, Coal and Coke, Buggies, Laries, Lumber Trucks, Tram Cars. A large stock of new and second-hand Boilers, cheap.

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### Wrought-Iron Coil Boiler

For Heating By Steam or Water.

The Greatest Fuel Economist. Easily Operated. Needs No Cleaning. Perfectly Safe. Cannot Explode. Durable. Lasts a Lifetime.

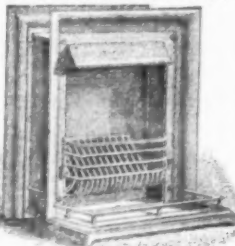
CATALOGUE FULLY EXPLAINING THE ABOVE SENT FREE. ESTIMATES FURNISHED.

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Smoke Stacks, Steel Tanks, Steam Pumps, Feed Water Heaters.

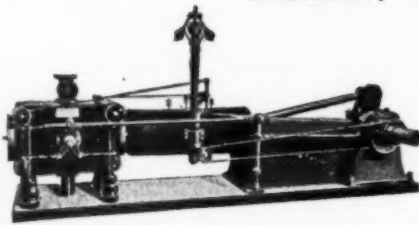
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Saw-Mill Machinery.

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PROVIDED WITH U SHAPED  
TUBES.

It Never Leaks.

"THE HIGHEST GRADE ONLY."

Our Catalogue contains the representative names of a large number of contented buyers of

## BERRYMAN HEATERS

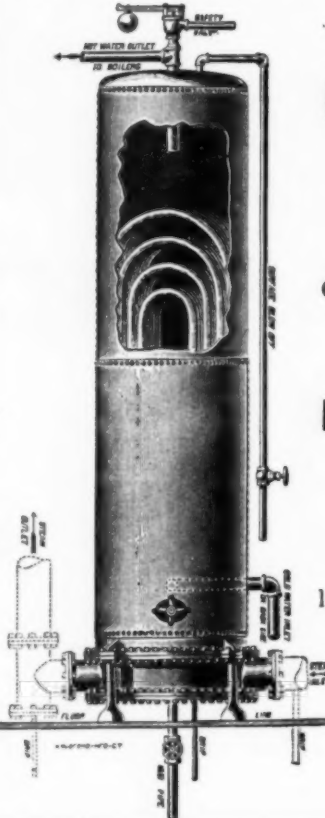
built by us in last  
twenty years.

For prices, catalogue and particulars, apply

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125 N. 4th St., PHILADELPHIA PA.

I. B. DAVIS & SONS, Makers,  
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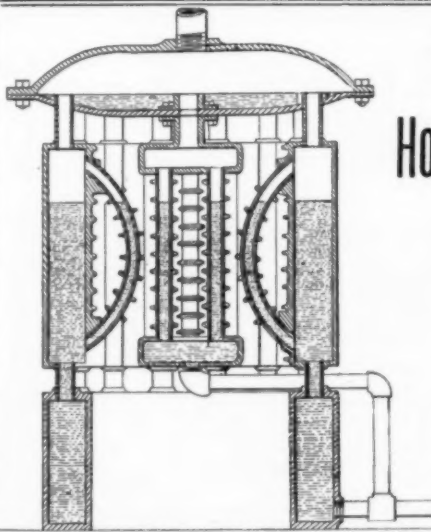
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For Steam  
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HAS NO SUPERIOR.

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Heating, Ventilating and  
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HOME OFFICE-CINCINNATI.

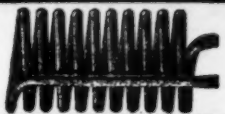
Operating in the Southern States.

CINCINNATI. MEMPHIS. ANNISTON. HOUSTON. ATLANTA. LYNCHBURG, VA.



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of  
Iron, Brass & Copper Pipe.  
Send for Catalogue.



The National  
Pipe Bending Co.  
97 Lloyd St.  
New Haven, Conn.

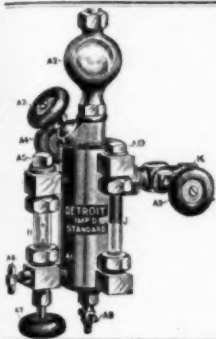
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possess all the improvements and good features that have been suggested by our own and our customers' experience during the past 20 years.

They are being used by more than nine-tenths of the prominent American engine builders, who are good judges of lubricators. Many of these have used them continuously for more than 15 years.

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GLASS OILERS.

**DETROIT, MICH.**

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HILL  
ENGINE

MEANS

THE  
BEST  
ENGINE

Write us and we will tell you why.  
Have you seen our new Catalog "E"?  
You can for the asking.

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North Park Street,  
Kalamazoo, Mich.

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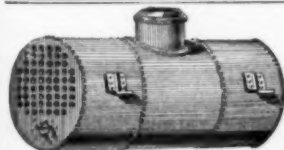
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Safe,  
Economical,  
Durable,



### Water Tube Boilers.

SHOPS AT  
Phoenixville, Pa. St. Louis, Mo. Chicago, Ill.

**HARTLEY'S BOILER WORKS,**

Boilers, Stand Pipes, Tanks,  
Smoke Stacks, etc., etc.

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With Rivet Holes Drilled after Plates are Bent and in Position, Tanks and Sheet Iron Works, Engines, Cotton Gins and Presses. Machinery for Fertilizer Works and Phosphate Washers, Asbestos Magnesia Pipe Covering and Magnesia Cement Felting for Boilers, Domes, Steam Piping, etc.

**VALK & MURDOCH IRON WORKS, Charleston, S. C.****INTERNATIONAL BOILER COMPOUND CO. Established 1882.**

MANUFACTURERS OF  
Solid, Liquid and Powdered Boiler Compound,  
Prevents Corrosions and Incrustations, Removes Scale, Preserves the Iron, Increases Capacity of Boiler and saves 15 to 60 per cent in Fuel.

Satisfaction Guaranteed. Trial Orders Solicited. Write for Prices.

Manufacturers of the  
INTERNATIONAL COMPOUND FEEDER. | 47 MARKET ST., CHICAGO.

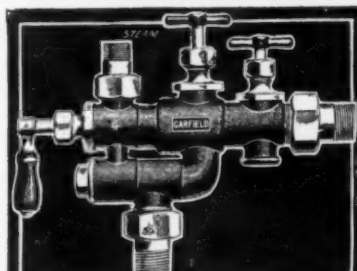
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Tanks, Stacks, Stand Pipes and Sheet Iron Work; Shafting, Pulleys, Gearing, Boxes, Hangers, etc. Mill Castings.  
Cast every day; work 180 hands.  
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## Steel and Malleable Castings.

True to Pattern. Quality Unsurpassed.  
Steel will harden like Tool Steel.

ACME STEEL & MALLEABLE IRON WORKS,  
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A Stationary Boiler Injector that is in a class by itself. It's perfect.

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### Inspection and Insurance.

Boilers do explode and cause damage to property and sometimes destroy life or cause personal injury.

Inspections carefully made tend to prevent explosion, and insurance provides indemnity against loss by explosion.

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Home Office, BALTIMORE,

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SURPLUS TO POLICYHOLDERS, - \$1,468,000.00.



### "The STERLING" EXHAUST SYSTEMS,

Fans, Dust Collectors, Automatic Furnace Feeders, Galvanized Steel Piping, Blast Gates, etc.

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PIPE HEAD  
Prevents the rotting of roofs and walls.

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and COMPLETE POWER PLANTS,  
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### When Buying Feed Water Heaters

When a man wants to buy a Feed-Water Heater, he either carefully investigates all the different appliances that are presented for his consideration, or else he is convinced by his previous experience. It is safe enough to buy the same kind that was used before, but something better may have come into general use since the previous purchase or the last investigation.

While there are hundreds of thousands of horse power of COCHRANE HEATERS in successful, satisfactory service, there are, we suppose, thousands of steam users and engineers who are not acquainted with these appliances, or what they will do.

We will be very glad to have the opportunity of submitting full information, because these "COCHRANES" represent the highest development (along common sense, practical lines) of appliances for fully utilizing the heat in exhaust steam for heating, water and for purifying it, whether for boiler feed or other purposes. All the little "kinks" of design and construction that will make a Heater more durable, more reliable, more automatic and easier to clean, suggested or brought out by some fourteen or fifteen years' experience in this particular line will be found in the "COCHRANES."

There is full warrant for every claim we make. Write for Catalogue 12-H.

### COCHRANE HEATERS

Do precisely what we say they will.

Harrison Safety  
Boiler Works,

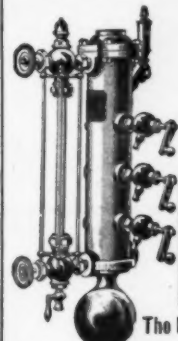
Allegheny Ave. and 17th Street,

**PHILADELPHIA, PA.**

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### Safety Water Columns

Save  
Fuel, Repairs, Stoppages.  
ECONOMY.  
SAFETY.



We urge our patrons to see that the name "Reliance" is cast on all columns. No other person or corporation is authorized to manufacture Reliance Steam Specialties.

The Reliance Gauge Column Co.

SOLE MFRS.,  
CLEVELAND, O.

79 E. PROSPECT ST.,



## TUBULAR BOILERS,

POWER TRANSMISSION  
MACHINERY,

**DuBOIS BAND SAW MILLS.**

We will give you good work  
and satisfaction.

**DuBois Iron Works, DuBois, Pa.**



## The Wright Improved Safety Water Column

gives fullest measure of satisfaction always. The name is a guarantee of first-class material and workmanship, absolute safety and certainty.




## The Wright Emergency Steam Trap,


a wasteless trap of wonderful capacity.  
Particulars of the above sent on request.

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KELLY V GRATE.

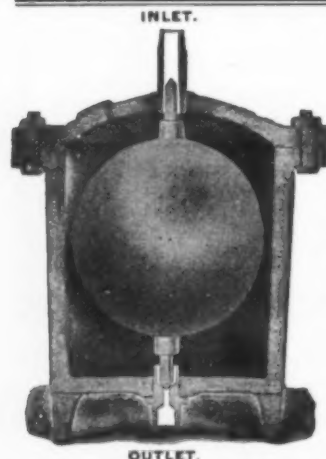


KELLY'S IMPROVED GRATE BAR.

10 to 20 PER CENT. MORE AIR SPACE IN  
**KELLY IMPROVED GRATE**  
Than Any Grate Made.

**Kelly Rocker Grates**  
Require no alteration in furnace. Simply taking the place of any ordinary grate.  
Very easily set. Is both Rocking and Dumping.

**KELLY FOUNDRY & MACHINE CO., 8 Purl Street, GOSHEN, IND.**



An order for a Eureka Steam Trap is a stop loss order.

CHASSELL, MICH., March 24, 1901.

EUREKA IRON CO.

Dear Sirs: I desire to state that the Eureka Steam Trap sold us last spring is "Eureka" indeed. It has handled the condensation of 540 ft. of 6" pipe and has never wasted an ounce of steam.

Respectfully,

WALTER W. WARNER, Engineer,  
Sturgeon River Lumber Co.

Send for Catalogue.

**EUREKA IRON CO., 7 W. Randolph St., CHICAGO.**

## THE FIRST COST

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## Flexible Metallic Tubing



It lasts so long, is so practical, so profitable in ultimate results, that it is far and away the best investment.  
Write for Catalog.

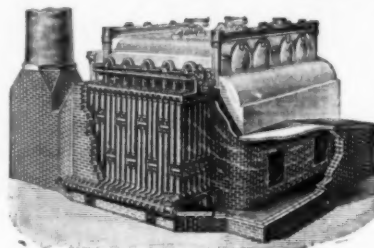
**WALTER L. FLOWER & CO.**

311 Chemical Building,

ST. LOUIS, MO.

It Provides a Reserve Force of Boiling Water Ready for Immediate Use.

## Green's Economizer



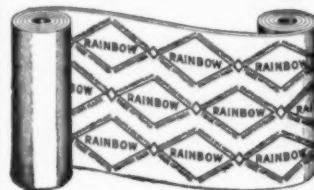
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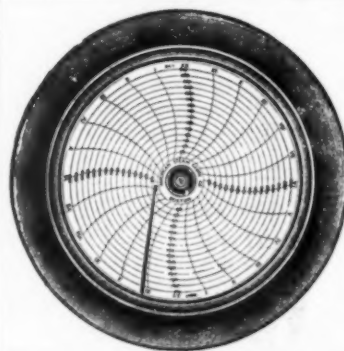
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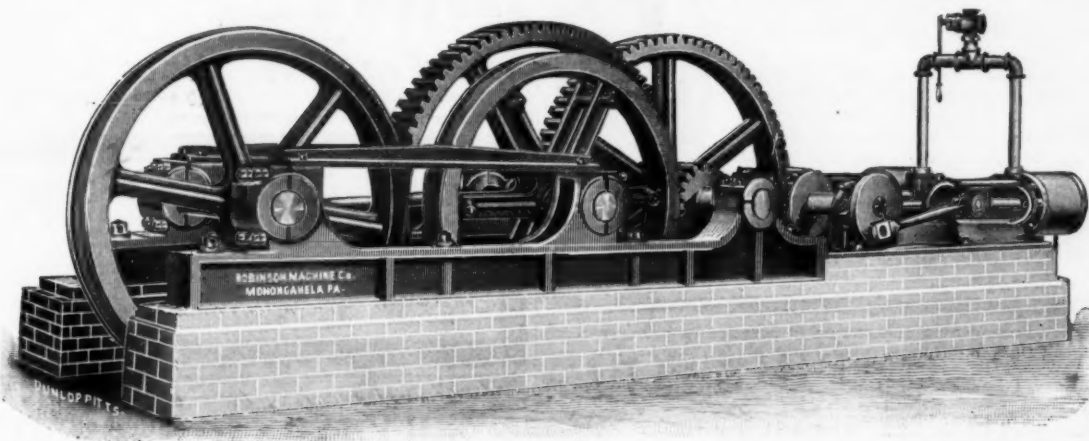
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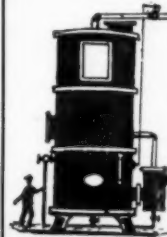
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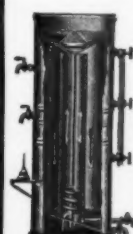
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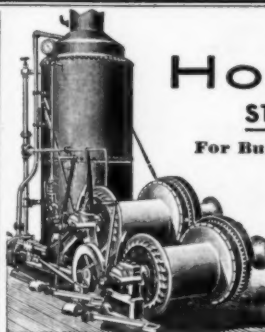
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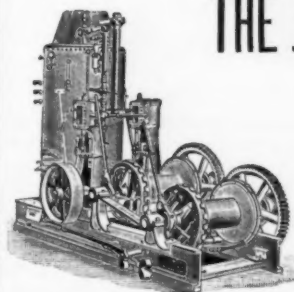
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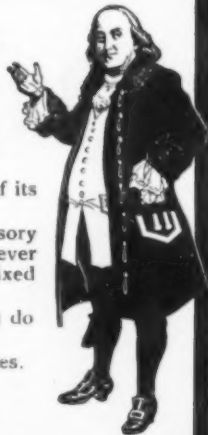
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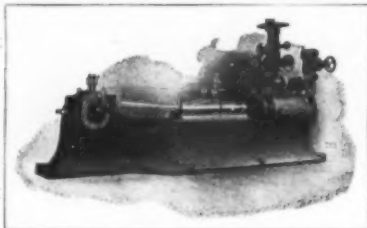


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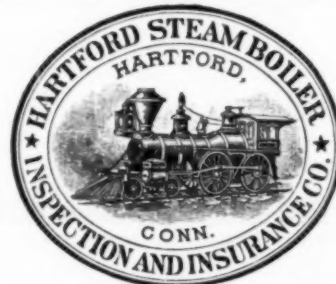
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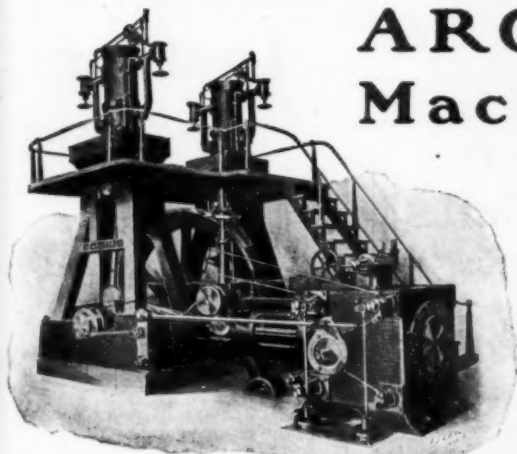
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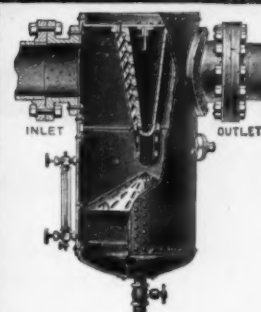


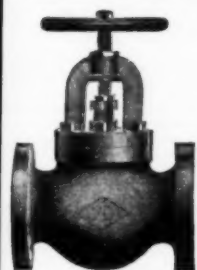
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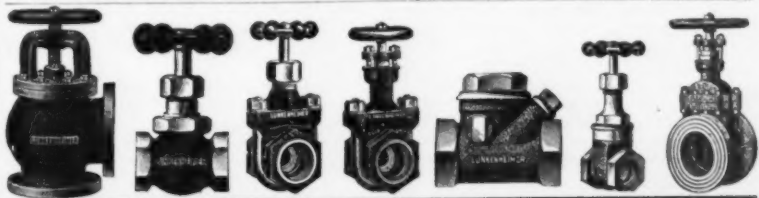


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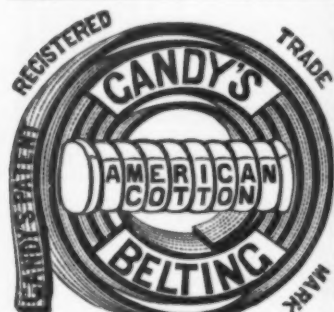


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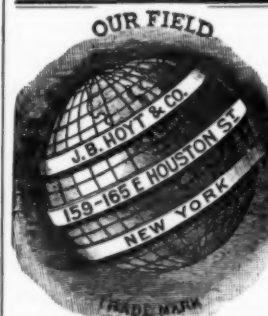
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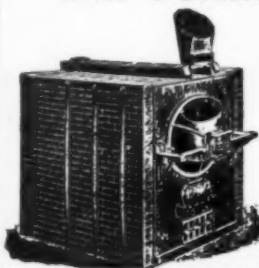
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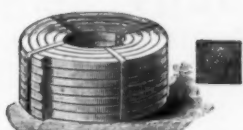
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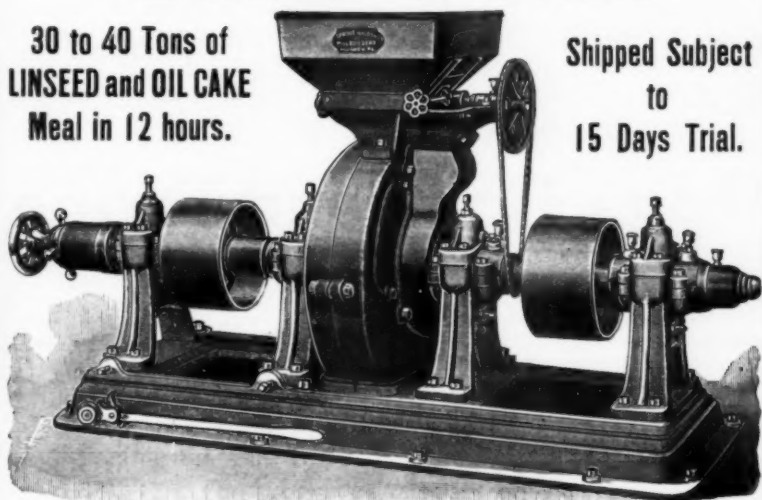
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### Important Litigation Relating to Magnesia Covering Patents.

The **Keasbey & Mattison Co.**, the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the **Philip Carey Mfg. Co.**, **George D. Crabbs**, **J. E. Breese**, **Schoellkopf, Hartford & Hanna Co.**, **J. F. Schoellkopf, Jr.**, **James Hartford**, **W. W. Hanna**, **C. P. Hugo Schoellkopf**, **Jesse W. Starr**, **C. W. Trainer Mfg. Co.** and **C. W. Trainer** to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50 per cent. of magnesia, and especially coverings containing 85 per cent. of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit.

Beware of Fraudulent so-called "Magnesia" Coverings as well as those infringing on patents.

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# MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

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## Manufacturers' Record.

RICHARD H. EDMONDS, President.  
THOMAS P. GRASTY, Vice-President.

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BALTIMORE, SEPTEMBER 12, 1901.

### COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

### No Room for Anarchy.

The thanksgiving feeling of relief that has come to the country with the prospect of Mr. McKinley's recovery from his wounds has by no means dissipated the horror of the anarchist's blow at American institutions nor lessened the conviction that American liberty shall no longer be a cloak for the license pointing straight to crimes of violence. The insanity of anarchy could have no better demonstration than in the attempt upon the life of the President of a country where the individual enjoys a measure of freedom unsurpassed in any other land, in the fiendish assault against a man of the personal traits of William McKinley. Assassination is the absolutely inexcusable means for the settlement of any contention, personal or public, in any land. There is certainly no room for it in the United States. Now that it has ended the career of two Presidents and one governor, and has threatened a third President within one generation, the American people must take united action to eradicate its germs and to prevent the importation of others from foetid Europe. The shooting of President McKinley at Buffalo has brought the country face to face with a crisis the extent of which but comparatively few persons may comprehend at once, but there is already sufficient appreciation of its seriousness to compel prompt action for a prevention of a repetition of it. The necessary legislation to that end will, of course, be forthcoming as soon after the assembling of Congress as possible. In the meantime men who value their American citizenship may exert themselves in cultivating a public sentiment that will suppress all acts which are likely to lead the anarchist to his infamy.

### Why the South Is Prosperous.

If anybody seeks the reason for the prosperity at present enjoyed by the South, he will find it largely in the fact that during the past two seasons \$858,352,369 worth of cotton has been marketed by Southern farmers. More than half of that sum, or \$494,567,549, was the proceeds of the season of 1900-1901, ended August 31. The valuable statistical review of that season, made by Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, and published on other pages of this week's Manufacturers' Record, throws a flood of light upon the process whereby the South is rapidly making industrial history.

The past year was a record-breaker as to the total value of the crop, the greatest ever given to it, showing an increase of \$130,782,729 over the value of the crop of the preceding year. That record is by no means the ultimate one, for the world will soon demand 12,000,000 to 15,000,000 bales a year of the South, and the crop can be readily pushed to these figures, and eventually far beyond them. The crop in Texas was 1,218,000 bales larger than in the preceding year, and was 36 per cent. of the total, and only 40,000 bales less than the total crop of 1860-1861.

In addition to receiving more money than ever before for its staple, the South manufactured more cotton than in any other year. It was thought at one time that this would not be so, for the interruption of the Chinese trade, to which Southern mills are the main contributors, narrowing the market for fabrics at a time when the world demand for the raw stuff was maintaining a price averaging \$47.63 a bale, and the tendency of established mills to turn to finer numbers, together with the shortening of hours in the mills, especially in the second half of the year, operated toward a diminished demand. But new mills came into the field, not in as great number as during 1890, but yet sufficient to add 23,819 bales more to the annual consumption, some indication of the trend of mill-building being given in the increases of consumption of 16,435 bales in Alabama, 15,389 in Georgia, 13,340 in South Carolina, 1753 in Mississippi and 107 in Louisiana.

In the meantime the takings by Northern mills fell off 101,403 bales from those of 1899-1900. That is significant in itself, but becomes more so when a comparison is made of consumption of bales at Southern and Northern mills during the past ten years by means of the following table, in which the figures for the latter represent takings, and for the former, consumption:

Year ended	Northern mills.	Southern mills.
August 31.	Bales.	Bales.
1892.....	2,190,766	886,080
1893.....	1,687,286	743,848
1894.....	1,601,173	718,515
1895.....	2,063,839	802,338
1896.....	1,600,271	904,701
1897.....	1,804,680	1,042,671
1898.....	2,211,740	1,231,841
1899.....	2,190,095	1,399,399
1900.....	2,068,300	1,597,112
1901.....	1,966,897	1,620,931

In 1892 the 686,080 bales consumed

by the Southern mills were practically 23.84 per cent. of the total number which went to the mills of this country. In 1901 the 1,620,931 bales for the South were 45.17 of the total consumed in American mills. During the ten years the consumption by Southern mills increased every year but one, 1894, and shows a total advance of 134 per cent., while the takings by Northern mills, which have been see-sawing, were actually 223,869 bales less in 1901 than in 1892. The occupation of the Northern mills in the production of finer goods, as those of the South have gained greater importance in the trade of cheaper stuffs, as they have increased in number during the decade from 340 to 668, explains in great measure the stationary takings of the former.

In the advance of Southern mills and in their sharing possession, perhaps, of territory for trade once monopolized by Northern ones, is no reason for alarm in New England. All the mills of this country used but 34 per cent. of the crop of 10,383,422 bales last year. At the same time this country imported \$34,116,177 worth of cotton goods, of which \$6,116,605 represented cloths. As long as the disproportion between the amount of cotton grown and the amount used in American mills continues, as long as the South raises but one-tenth of its possible crop, as long as millions of dollars' worth of cotton goods are imported, so long ought there to be no occasion for faint-heartedness in any quarter of the country about the future of America's textile industry, but rather should there be the incentive to push to the uttermost the energetic efforts which have given New England mills their present standing, and are yearly increasing the effectiveness of the Southern ones.

### Texas' Mineral Wealth.

Prompt action by the legislature of Texas last March, under the spur of the discovery of petroleum at Beaumont, resulted in the organization on May 4 of the University of Texas Mineral Survey, with William B. Phillips as director. The Survey has been equally prompt in getting to work, and has already issued its first bulletin. It is quite appropriate that this publication should deal with Texas petroleum. In more than one hundred pages a brief but comprehensive sketch of the history of the oil in the State and treatises upon the nature and origin of petroleum, oil and gas-bearing formations and the use of petroleum as fuel are presented, with half-tone illustrations of features of the Corsicana and Beaumont fields, and large maps of the latter region and of the eastern part of Texas, with special reference to its geological characteristics. The report, an exceedingly valuable one to everybody interested in Texas oil, is based upon data already in hand when the Survey was organized, and new material collected since the first of the year, including the results of chemical work

on the composition of various Texas oils and the determination of their heating values as compared with coal or lignite. Though the bulletin went to press less than two months ago, additional facts have accumulated as prospecting has been pushed in other parts of the State and new wells have been sunk, and, if necessary, a second edition of the work will be published. In the meantime material is being collected for bulletins upon the gold, silver, lead and zinc prospects and mines west of the Pecos river, and upon the extent and utilization of Texas deposits of cement rock, sulphur, asphalt rock, clay products, building stones, etc. Its oil developments have aroused practical interests in the mineral potentialities of Texas, which has made enormous strides agriculturally. The careful work of the Mineral Survey cannot but increase this interest and lead to a full development of the State's industrial power.

### Industrial Sectionalism.

Symptoms are again visible of a labor disturbance in Fall River, Mass., because of a threatened wage reduction, which is really due to the pressure of competition between New England and the South in cotton manufacture. Nothing could better illustrate the need of a broad protective policy. In this instance, of course, it cannot come in the form of tariffs, nor should it, but it can and ought to come in the form of uniform hours of labor throughout the country. The interest of civilization demands that the more advanced sections of the country shall not, by reason of their advancement, be put to a disadvantage as compared with the less advanced. As far as possible, without paternal interference, public policy should insist that the competitive opportunities shall be approximately equal. Wages and other items of cost must be left to the free action of economic forces, but the State can and ought to see that, so far as the legal length of the working day is concerned for competing industries, it should be alike for all. It is a matter of national importance that the social conditions of the most advanced sections of the country shall not be injured and the standard of life of the laborers lowered by unequal economic conditions which might and ought to be made uniform throughout the country.

These words of foolishness are from Gunton's Magazine, a publication alleged to be devoted largely to economics—so devoted, in fact, that it has been advocating the teaching of economics in the public schools. Its inability to handle economics itself and to be an intelligent guide in that field is pretty clearly indicated in the argument leading to its contention that "the interest of civilization demands that the more advanced sections of the country shall not, by reason of their advancement, be put to a disadvantage as compared with the less advanced," and that, therefore, the federal government shall close down, if necessary, Southern cotton mills because New England cotton mills are in such a stage of civilization that they are most of the time either having trouble with strikers, getting ready to have such trouble or recovering from it. Stripped of its verbiage, that is about the purport of Professor Gunton's suggestion, which is a reductio ad absurdum. We do not be-



lieve that the average New Englander holds to such a doctrine, or that he recognizes Gunton's Magazine as fitted to represent him, for, although New England may be credited with a fair reputation for sectionalism, New England has too much horse sense to acknowledge, as Gunton's has done, that an advanced section of the country must be given extraordinary assistance against the less advanced. To frame such a proposition is to admit an absurdity. New England is too shrewd to be absurd, and however sectional it may be in its instincts and in its accomplishments, it has generally been careful to cultivate a public sentiment that will bring the other fellow, in resisting its designs, under the suspicion of being sectional.

With apology, therefore, to New England and to the enlightenment of Professor Gunton, who is old enough to know better, the Manufacturers' Record will, for the nonce, and as contributing to the truth of history, indulge in a bit of sectionalism.

The Professor doubtless remembers that during the first half of the last century there was a great deal of sectionalism rampant, arising from the efforts of the most "advanced" section of the country, if you please, to extend its influence over another section. Superficially, the sectionalism had its origin in a combination of demagogic politics, false philanthropy and quasi religion, always an unfortunate mixture, but its real basis of power was economic.

As a matter of fact, the great field into which the most "advanced" section would extend its missionary efforts was really the more advanced, judging from the standpoint of actual wealth possessed or from that of the aggregate contentment and happiness of the population, which ought to be the ultimate object of advancement. The one tremendous drawback upon the fortunate section, not great enough, though, to rob it of its advantages, was a system, regretted by thinking men, but unavoidable, by which the great mass of employers were obliged to own their labor. Despite demagogic appeals to the ignorant fears and prejudices of New England labor at the time, in talk of competition with "cheap" slave labor, that labor was very expensive. Wherever "free" labor flourishes the employer is not compelled to carry as a dead weight his labor for ten or twelve years until it begins to be productive or for ten or twenty years after it has ceased to be of value. There the employer, unless he has once enjoyed the discipline and the beneficial education of owning labor, is not concerned, as a rule, about the past or the future of his labor, and misses besides the wonderful blessings of personal contact as with a dependent member of his own family. But the expense of the peculiar institution to the individual proprietor, creating the basis of much of the opportunity of labor in the "advanced" section to escape pauperism, was as nothing compared with the expense to the South in suppressing the development of its industrial potentialities.

Well, the sectionalism which tended to bring the South to the level of New England finally managed to involve the general government in its undertaking. The result was ruin for the South, but ruin not unmixed with good, for the South was relieved of its expensive labor system, and in spite of the demoralization wrought through the method and the suddenness of that re-

lief, was, by the release into more productive channels of its great army of white labor, placed in a position to become more advanced than ever beyond the alleged "advanced" section.

Nature antagonized is a mighty hard customer. Man may seek to dominate it, but he will inevitably be smitten upon the thigh and permanently crippled if he pushes the thing too far. If, as Gunton's pretends to imagine, the labor disturbances in Fall River are due to the competition of Southern cotton mills with those of New England, it is because the South is naturally more advanced than New England. The attempt forty years ago to drag the South from its advanced position, while temporarily successful, has been rather of a boomerang in its effects. This the mass of New Englanders, sensible men as they are, thoroughly understand, and they will not sustain Professor Gunton in his ridiculous economics.

He ought to come South for a while. If he studies the situation at first hand carefully and prayerfully, he will shortly discover that although the black labor of the South, cheapened in its cost by emancipation and thrown into competition with Northern white labor, to the disadvantage of the latter, has had not a little to do with the South's recuperation from prostration, its magnificent strength and its advanced position is due to the millions of its white workers in the fields, the forests, the mines, the furnaces and the workshops, practically all of the best American stock, welcoming their changed conditions and their chance to earn an honest living, free in a vast majority of cases from the burden of contributing from their earnings to the support in baneful idleness of the labor agitator, and attending to their own business, no matter what happens in New England, and, in that, setting an excellent example for Professor Gunton and his school. He will be convinced that all the national legislation in the world can avail nought for placing a coal mine in the cellar of a cotton mill, for making cotton to grow in New England or for turning loose an oil gusher on Cape Cod. He will begin to know what economics really is, and in contending that "the interest of civilization demands that the more advanced sections of the country shall not, by reason of their advancement, be put to a disadvantage as compared with the less advanced," will acknowledge that, therefore, national legislation seeking to force upon the South the disadvantages of New England should be avoided. In that he will be sustained by experienced and broad-minded New Englanders.

#### Consideration for Labor.

Several hundred operatives are employed in the night shift of the Proximity Manufacturing Co. at Greensboro, N. C. They used to bring their luncheons with them, but under a policy recently adopted by the company they now suspend work at midnight and are served at the expense of the company with chicken, ham, roast beef, coffee, etc., the bill of fare varying each night. The Southern Industrial Review, Greensboro, which announces this arrangement, says that the management and the operatives are highly pleased with it, and that the latter appreciate the thoughtful kindness of the former.

The Massachusetts Mills of Georgia at Lindale has built and equipped a first-class schoolhouse in the town, and

is making efforts to induce every child to attend, there being no charge to the pupils' families. The management has also announced, in common with other mills of the State, that hereafter no week's work shall exceed sixty-six hours; that no child less than ten years old shall work in the mills under any circumstances; that no child less than twelve shall work in the mills unless it has a widowed mother or physically disabled parents dependent upon it for support, or unless it is able to read and write or shall attend school four months each year, and that no child under twelve shall work in the mills at night.

These incidents are examples of the interest taken by the managements of Southern mills in their employees. Their voluntary character is conducive to a much better frame of mind now and a far happier future for all persons concerned than if such action were the result of demagogic compulsory legislation. They illustrate, too, some of the conditions which Southern industry has to face in working out its own salvation. They are mentioned for the benefit of the uninformed classes in other sections who, in mistaken philanthropy, encourage the labor agitator and his literary aids in their designs against the South.

#### American Iron and Steel.

Mr. James M. Swank, general manager of the American Iron and Steel Association, has prepared for the United States Geological Survey a comprehensive survey of the situation of American iron and steel at the close of the nineteenth century. He has collected in chronological order the leading incidents in the history of the industry from 1619, when the Virginia Company of London undertook to begin iron-making in Virginia, until 1900, when the United States for the first time made more open-hearth steel than did Great Britain, and has presented detailed iron and steel statistics for 1899 and 1900. In his general survey he says:

While great progress has been made in the last quarter of the nineteenth century in the development of the world's iron and steel industries, the most notable progress has been made in the United States. This country today leads all other countries in the production of iron and steel. This prominence in the manufacture of these articles is only in part due to the bounty of nature in providing liberal supplies of the raw material needed; it is largely the result of friendly legislation by the general government, first, in more firmly establishing in 1861 the protective tariff policy, which has since been effectively maintained with but brief interruptions, and second, in adopting at about the same time the policy of liberal grants of land to railroad companies. Through the operation of the protective policy the home market has been preserved for the home producers of iron and steel and of all articles made from them, and through the operation of the land-grant system, supplemented by the homestead policy, thousands of miles of railroad have been built in the Western States and Territories that otherwise would not have been constructed. With the building of these railroads the population of these States and Territories has been greatly increased, the consumption of iron and steel and of other manufactured products has been enlarged, our vast mineral resources have been discovered and developed, and the whole country has been enriched. Thousands of new farms have been opened, our agricultural products have been many times multiplied, and both home and foreign markets for the sale of our surplus crops have been easily and cheaply reached.

But many of these railroads could not have been built if our protective tariff policy had not built up our iron-rail industry in the third quarter of the century and our steel-rail industry in the fourth quarter. Until we began to make our own iron rails, and afterwards our own steel rails, foreign manufacturers charged us excessive prices

for such rails as we could afford to import. Both the industries mentioned had at the first to struggle for their very existence against foreign competition, the early duties on foreign iron rails and afterwards on foreign steel rails not being sufficiently protective, but in the end the control of the home market was gained, the production of rails increased enormously, and the prices were steadily reduced. In the meantime, as the direct result of the home competition which the protective policy had encouraged, the production of all other articles of iron and steel greatly increased, and their prices were also reduced, mines of iron ore and coal were opened which would otherwise have lain dormant, and a greatly-enlarged home market for all the products of the firm was created.

After all that has been said, however, of our wealth of natural resources for the production of iron and steel and of the influence of the protective policy and the land-grant system in promoting their manufacture, the truth of history requires that it be distinctly and positively stated that all the advantages above noted would have failed to give to our country in the last quarter of the nineteenth century steel rails and steel in other forms as cheaply and abundantly as they have been supplied if these advantages had not been supplemented by the constructive and executive abilities and the persistent energy of American manufacturers and the inventive genius and technical skill of American engineers and mechanics. The courage of our iron and steel manufacturers in entering upon new enterprises of the greatest magnitude, and the skill displayed by our engineers and mechanics in attaining important and valuable metallurgical results, must be a constant marvel to every student of our country's industrial development.

#### Tallulah Falls Exposition.

[Special Cor. Manufacturers' Record.]  
Tallulah Falls, Ga., September 6.

The Blue Ridge and Tallulah Falls Exposition, to be opened here on September 17 by the governors of North Carolina, South Carolina and Georgia, has interested the people of Habersham, Rabun, Towns, White and Banks counties, Georgia, Macon and Clay counties, North Carolina, and Oconee county, South Carolina. This unique exposition has been planned to attract attention to a country rich in natural resources which is being opened up by an extension of the Tallulah Falls Railroad to Franklin, N. C., forty miles from here, and which will open up trade with the Little Tennessee valley.

Numerous surveys for this road have been made in the past, and efforts to build a railroad through this section date as far back as 1856. Now, Mr. George L. Prentiss of New York, who owns the present line from Nornelia to Tallulah Falls, has secured an engineer, who has located a comparatively inexpensive route, which, instead of cutting through the mountains, follows the watercourses almost in a direct line to Rabun Gap, where it will cross the Blue Ridge, and whence it follows the Little Tennessee to Franklin. In Rabun Gap is the divide of the headwaters of the Tennessee and the Savannah rivers. In these mountains of Georgia and Western North Carolina are deposits of long-fibered asbestos, manganese, bauxite, kaolin, iron and perhaps other metals which are to be developed through the railway extension, and which the exposition will bring to the attention of the investor and the developer. The Falls of Tallulah, where the river makes a descent of 700 feet within less than a mile, have a measured 22,000 horse-power, which will some day be harnessed to turn the spindles of cotton mills. It is a picturesque point, and numerous hotels are filled with summer tourists from far and near, attracted by the healthful location, the surroundings and the mineral waters.

Plans are being made for a survey of the soils of Georgia under the supervision of Milton Whitney of the United States Department of Agriculture.



# WEST VIRGINIA: TYPICAL OF SOUTHERN POWER

By Dr. Charles W. Dabney, President of the University of Tennessee.

[Written for the Manufacturers' Record.]

In the Manufacturers' Record of August 15 the writer sought to show what great advantages accrued to the Southern States from the fact that their resources for agriculture, mining and manufacturing were so wonderfully diversified and commingled. Resources for a single line of industry, however great, do not support the largest production or the noblest civilization. The country having the best conditions for healthful and vigorous human development, the greatest variety of agricultural and horticultural products and the most varied sources for mining and manufacturing will be the home of the most powerful, wealthy and happy people. I attempted in that paper to show that the South generally, but pre-eminently that portion of it known as the Appalachian region, possessed all these advantages in the highest degree, and, in addition, had the best location with regard to the markets of the world enjoyed by any country. In a short article it was only possible to illustrate these principles in a broad way. It is, therefore, proposed in this letter, and the one which will follow it, to demonstrate further and to enforce these great economic laws by illustrations drawn from a portion of the South which remained a long time almost unknown, and is still very imperfectly explored and very little developed. I ask the reader to review with me as rapidly as may be some of the characteristics of the young mountain State of West Virginia.

Both historically and geographically, Old Virginia is the first of the Southern States. West Virginia, cut off by the cruel hand of war from the Mother State, will ever be proud of her historic heritage and geographical position as one of the greatest Southern States. Lying, as it does, right across the Appalachian region, it may be fairly taken for our study as a specimen of this the most beautiful, the richest in resources and the most healthful portion of the American continent.

The State of West Virginia lies between the longitudes 78 degrees and 83 degrees and the latitudes 37 degrees and 40 degrees; it occupies thus the choicest position in the north temperate zone. It covers the whole of the Appalachian system west of the crest of the Alleghany mountains for 230 miles from northeast to southwest and 100 miles from southeast to northwest, and has 24,780 square miles of territory. It is about the size of the State of Ohio, and three times as large as Massachusetts. It varies in elevation from 280 feet at Harper's Ferry to 5000 feet on Spence Knob, in Pendleton county. The mountains are bold, but not rugged or bare. They are clothed with magnificent timber or grass to their very summits.

For manufacturing and commerce the location of this State is unsurpassed in the world. Harper's Ferry is only eighty-one miles from tidewater at Baltimore; the eastern State line is only 300 miles by rail from Newport News, the terminal of the Chesapeake & Ohio system, and the southwestern corner is only 340 miles by the Norfolk & Western Railroad from Norfolk, Va. The State is bounded by the Ohio river on the northwest, which, with many railroads, give its products access to all parts of the Mississippi valley, the great West and Southwest. The varied and almost incalculable resources, which we shall now attempt briefly to enumerate, lie thus most conveniently for both the interior or continental and

the exterior and greater world's trade.

The northeastern section of the State is drained by the Potomac, which runs through the rich grain fields and grass meadows of Berkeley, Morgan, Hardy and Hampshire, possessing in its falls and rapids more water-power than the whole of New England. And this is only one-tenth part of the State. The conditions just described make it a wonderfully well-watered State, with almost incalculable water-power distributed throughout all sections. Except in the Potomac watershed, all its rivers flow into the Ohio. The Monongahela carries a burden of West Virginia wealth up through Pennsylvania to the great markets of the North and East; the beautiful Kanawha, with its mountain tributaries, the Elk and the New rivers, drains the central portion, and the Big Sandy and the Guyandotte open the way for the southwestern counties to the Ohio. These rivers fall in volumes large enough to run great factories, from an elevation of 3000 feet in the Pocahontas-Randolph region to 700 feet at Point Pleasant and 550 feet at Kenova, on the Ohio, a fall of, say, 2400 feet in a course of 100 miles. There are water-powers enough here to run all the factories in Great Britain. But still it is nearly all going to waste.

Wonderful to say, in this land of incalculable water-powers are also found the greatest undeveloped coal fields probably in the world. There are, in fact, three great coal fields in this State. The upper or Pittsburg coal underlies seventeen counties, 7500 square miles in extent, in the northwestern portion of the State; the middle or Kanawha coal is found near a wedge-shaped territory with the point to the northeast and the thick end on the Kentucky line, containing 8300 square miles, and the lower or New River coal, including the so-called Pocahontas coal, probably the best bituminous and coking coal of commerce, is found in a belt of six counties; with an extent of 2200 square miles, in the southeastern portion of the State. Coal has been mined for local use in at least fourteen other counties, making a total of fifty-two counties out of fifty-four which contain some coal. Each of these coal fields is already known to contain several seams of coal. The Pittsburg coal is bituminous, the Kanawha coals are bituminous, splint and cannel, the New River coals are coking bituminous, superior in quality and vastly exceeding in quantity the famous Connellsville coal of Pennsylvania.

It is only by comparison that one can grasp the vastness of these coal beds and their value to the world. England, with her commercial greatness largely founded on coal, the smoke of whose steamships darken in long streaks the atmosphere of all the seas, has only about 7500 square miles of coal lands; Pennsylvania, which leads all the States in coal production, has only 12,700 square miles, Ohio 10,000 and Kentucky 9000, as compared with West Virginia's 16,000 square miles of coal territory. And still it is a fact that the coal beds of this remarkable State have been scarcely scratched. Unquestionably, many new seams are still to be found, and many square miles will be added to this territory when the State is thoroughly examined.

The reader must, however, not infer that the coal field is entirely undeveloped. Coal is being mined upon a commercial scale in twenty-seven counties, and the production is increasing at an enormous

rate. The Chesapeake & Ohio Railroad was built in 1872, but coal mining had scarcely begun in 1880, when the State produced less than 2,000,000 tons of coal and coke, and stood seventh among the States in this industry; by 1890 its output had increased to 7,000,000 tons, while in 1900 it was nearly 22,000,000 tons, making West Virginia the second State in the Union in coal production. According to returns to the State officials in 1900, the chief coal counties produced coal and coke as follows:

## IN THE PITTSBURG FORMATION.

	Coal.	Coke in tons of 2000 lbs.
Harrison county.....	650,000	16,000
Marion county.....	3,000,000	300,000
Monongalia county.....	82,000	17,000

## IN THE KANAWHA FORMATION.

Preston county.....	404,000	46,000
Tucker county.....	1,000,000	300,000
Kanawha county.....	1,500,000	33,000

## IN THE NEW RIVER FORMATION.

Fayette county (partly in Kanawha formation).....	4,500,000	482,000
McDowell county.....	4,150,000	1,070,000
Mercer county.....	2,050,000	208,000

Within 100 miles of each other in West Virginia lie vast beds of iron ores of the best quality and coal of every kind, except, perhaps, anthracite, while limestone is abundant everywhere. The ores of Alleghany, Craig and Giles counties, Virginia, and of the adjacent county of Monroe, in West Virginia, a district about seventy miles in length and thirty in width, "occur in inexhaustible quantities above the water-level, and are thus particularly adapted for cheap mining; in fact, there is enough surface ore to permit of open work for a number of years" (Professor Orton). Within seventy-five miles of this territory are the unexcelled New River and Pocahontas coals and cokes. There are also extensive developments of excellent ores, chiefly red and brown hematites, in Greenbrier, Pocahontas, Pendleton, Hardy and Hampshire counties on the eastern border of the State. These deposits only await railroads to develop them. In almost all cases coal to coke and iron ores with limestone to flux them lie immediately at hand.

Enough has been said to illustrate the magnificent opportunities in West Virginia for all the industries based upon coal and iron. These resources are found in a healthful country, capable of supporting a vast population, and in close proximity to the great markets. Here is the basis for a tremendous manufacturing industry. No one dare predict what West Virginia will do in the next twenty-five years. Certain it is that it is to be a great mining and smelting State, second only to Pennsylvania, if it does not exceed it, in all the forms of production based on coal and iron ores.

At another time I will attempt to illustrate further the wonderful diversification of the industrial resources of the Southern Appalachian region by describing briefly some of the other mineral deposits, the oil and gas and the agricultural possibilities of this interesting State of West Virginia.

## NOW FORTY-TWO GUSHERS.

Oil Men Settling Down to Real Business at Beaumont.

[Special Cor. Manufacturers' Record.]  
Beaumont, Texas, September 8.

The most effective and probably the most scientific test under all conditions of the Beaumont oil as fuel applied to locomotives is that now being made by the International & Great Northern Railroad Co. This company is not content with using the oil on a small passenger engine and using that as a basis. It has equipped two 83-ton engines used for hauling freight (the largest in the State) with oil burners, one with the Best burner

and the other with the Hammill burner, and will run both of these engines on the same division from Palestine to Houston, a distance of 151 miles. These engines as coal burners are guaranteed to pull 940 tons. In order to get at the exact results, another engine of the same class is running opposite these two oil burners, but equipped with the best coal-saving devices, among others with the improved Bates fire door. Accurate figures are being kept of the work done on each engine, and in a short while the results of this test, which is by far the most thorough ever made in Texas, will appear in these columns.

Perhaps the largest outright sale of oil yet recorded is that made by the Manhattan Oil Co. of this city to the Forward Reduction Co. of Ohio. This latter concern has bought from the former company 5,000,000 barrels of oil, to be delivered within eighteen months, and on which contract a large cash payment has already been made. It is not definitely known what the Forward people propose to do with this oil, but as they have previously stated it was their intention to build a refinery, etc., in this vicinity, it is presumed the oil is for use of this proposed plant.

The "coming in" of wells on Spindle Top Hill is now so common that very little attention by the general public is paid to the fact. There are now on the Hill forty-two gushers. These are completed wells. Whether they will all furnish oil or not is not known, as, if accidents after the completion of the well happen to any one of them, they are carefully concealed, if it is possible to do so. For instance, it was not until a long time after the Lucas well ceased flowing that the general public was aware of the fact, although now the Guffey Petroleum Co. is preparing to clean the well out and make it ready for business. There are doubtless half a dozen others in the same condition. As a whole, however, it is fair to say that of the forty-two wells brought in, at least thirty-five of them are well finished and in good working order, possibly more.

The committee appointed some days since, and mention of whose work in connection with Mr. Caracristi was made in last week's report, have formulated a long set of rules to govern operations on Spindle Top Hill. The various companies have agreed to observe these rules—which are too long to set forth here—and the committee has taken the position that if anyone does not do so legal measures will be resorted to in the shape of mandatory injunctions. There is a determined effort on the part of the oil operators, which is backed up by the best citizens, to minimize the risk from fire in the field.

The various companies which are in a position to market oil are proceeding with their work in a thorough manner. There are now two or three big contracts held up in the State on which the various companies are making vigorous efforts to secure. The competition for these contracts is keen and spirited. The price of oil is very low at this time, and it is doubtful if it will go lower, except from some small company selling its total output at the well. There seems to be an impression, and it is strongly rooted, among the oil men generally that in a year from now this fuel oil will be selling for forty to fifty cents a barrel. This evidently cannot be based on any other foundation than the idea that eventually the field will be controlled by three or four large companies. Of course, this is rather premature speculation, but if oil is not found off Spindle Top Hill it is quite probable that the Hill will be found to be controlled by three or four large companies in the course of twelve months. With the wells belching forth oil at their present capac-

ity there is no other way on the top side of this earth that the price of oil can go to fifty cents a barrel.

#### OIL NOTES.

##### Facts About Petroleum and Its Uses.

It is announced that a vein of petroleum oil has been struck at a depth of 1130 feet at Cordova, Walker county, Alabama.

The Gulf, Colorado & Santa Fe Railroad Co. has placed in service the first of the oil-tank cars being built for the line. It has given an order for 200, which will have a capacity for 9400 gallons each.

The International & Great Northern Railway Co. has begun using oil-burning locomotives on its Galveston division, and the first engine thus equipped recently pulled a passenger train into that city.

Mr. W. W. Dexter of Houston, Texas, has issued the Texas Oil Guide, which has been officially recognized by the oil exchanges of Houston and Beaumont. In an exceedingly convenient form has been gathered fresh and timely information about Texas oil, iron, sugar, lumber, mineral resources and other matters of interest to the business man. Copies of the book will be sent to every stock exchange in the world, and will be a valuable advertiser of the resources of Texas.

#### NEW ORLEANS' GREATNESS.

##### Railroad Improvements and Commercial Advancement.

Mr. J. T. Harahan, vice-president and general manager of the Illinois Central Railroad Co., had as his guest in New Orleans last week Mr. Herbert M. Gibson, chief traffic superintendent of the Manchester ship canal, the great system built at a cost of nearly \$70,000,000 and thirty-six miles long, connecting Liverpool and Manchester. Mr. Gibson was given ample opportunity to examine the great shipping facilities of New Orleans, which city he visited for the purpose of arranging a line between New Orleans and Manchester. In an interview in the New Orleans Picayune he expressed great faith in the future of New Orleans, and said in connection with the proposed line to Manchester:

"There is every reason why New Orleans should profit by the development of this trade to a larger extent than any other American port. It is the natural point of export for grain, cotton and packing-house products, all of which Manchester imports largely.

"Commencing in October, the Meletta & Stoddart agency will operate a line to Manchester from New Orleans, with three regular sailings a month. It is the operation of regular lines of vessels, with regular sailings, which builds up commerce through any port. From what I have seen and have learned on my trip, there should be no trouble in providing cargoes for those vessels, and it should not be long before other lines are needed for the accommodation of the trade."

Mr. Gibson said he had been greatly encouraged by the information gleaned from Mr. Harahan. He thought there would be a large increase in the exportation of packing-house products through New Orleans, and that the other lines of exports would also show large gains. Yesterday afternoon he also met the representatives of the Texas & Pacific and other railroads entering New Orleans. He believes that this season the movement of cotton to Manchester from New Orleans will be larger than ever before.

Mr. Harahan announced that the Illinois Central has made arrangements for

at least two new steamship lines at New Orleans, and that there may be three or four new ones within the next half-year, as all Europe is watching the course of New Orleans, and it is no longer hard to get steamship lines interested in the city, for they all want to come there as soon as they know that there are proper facilities for handling the freight. An interview with him in the Times-Democrat shows the connection between the work of the Illinois Central Railroad at New Orleans and the development of its commercial importance. He said:

"Just to show you how things are, we have had to order 2500 additional freight cars within the last two weeks, and it is doubtful if this number will be sufficient to handle the business. We are sure that this section of the country has never seen such a period of prosperity as it is now experiencing, and we have to provide the cars to haul the freight. Our business is far and away ahead of last year, and it is growing every month. This applies both to export and import business. We saw this situation coming when we applied for the passage of the ordinance in the first place, but we were several months ahead of some of the people in town, who thought we were exaggerating the situation, and that the demands of the road would not be as great as we said they would. Yet before the ground has been struck on the new improvements we are short of facilities for the handling of our freight, and when the new docks are completed we are not sure they will be sufficient. Of course, this statement is based on the hypothesis that the business of the port will continue to grow as it has been, and we have no reason to believe that there will be any stoppage of growth. On the contrary, we think, from all we know now, that the business of the port of New Orleans will grow faster within the next five years than it has ever grown before, and that, instead of the facilities being too large, they will prove too small. We have great faith in New Orleans. We are gratified at the magnificent showing she is making, and believe she is but on the threshold of her development. We not only look for a great increase in the shipping of the port, but we expect to see this become one of the most important manufacturing centers of the country. The location is here, the city has the rates, and the discovery of oil at Beaumont will put cheap fuel within the reach of every man who wants to engage in the business of manufacturing anything. New Orleans is close to the cotton field, is close to the rice fields, is close to the oil fields, is close to the great forests of the South, and there is no reason why there should not be a great increase in the near future in the number of manufacturing enterprises here. We think the city is just waking, and we want to make arrangements for handling the increased business when she does get thoroughly awake. Instead of having too much room, we do not believe we will have enough before the next two seasons are over, for we have already enough new steamship lines to take up all the additional room we have secured. We simply want to see New Orleans occupy the place she is entitled to by virtue of her superior advantages, both as a manufacturing point and as a port. We look upon this city as one of the great centers of commerce of the United States, and we are willing to do our share toward advancing her interests."

A "Souvenir of Wilmington" is the title of a pamphlet containing very interesting views as well as valuable information about the city of Wilmington, N. C. It is issued by the Chamber of Commerce of that city.

## AMERICAN COTTON CROP FOR 1900-1901.

By Col. Henry G. Hester, Secretary of the New Orleans Cotton Exchange.

The cotton crop of the United States for the year ending August 31, 1901, amounts to 10,383,422 bales, showing an increase over that of 1899-1900 of 947,006 bales, a decrease under that of 1898-99 of 891,418 bales, and a decrease under that of 1897-98 of 816,572.

More than the entire increase of the total crop over last year was from Texas and Indian Territory, the production of which was 47 per cent. more, while the Atlantic and other Gulf States dropped off 4 per cent.

Compared with last year, in round figures, Texas, including Indian Territory, has increased 1,218,000 bales; the group known as other Gulf States, consisting of Louisiana, Arkansas, Mississippi, Tennessee, Oklahoma, Utah and Kansas, has decreased 179,000, and the group of Atlantic States (Alabama, Georgia, Florida, North Carolina, South Carolina, Kentucky and Virginia) has decreased 92,000. Coming on the heels of a depleted supply, amounting practically to famine the world over, the production has sold for a good round price, bringing to the South, in dollars, more than any other crop on record, and this notwithstanding the yield was larger than generally anticipated.

In face of an increased acreage, weather conditions during the growing season created the impression on all sides that less than a 10,000,000-crop was more than likely, and even when the Washington Bureau's estimate of 10,100,000 was put forth in December, although it had a marked effect on values, it came in the nature of a surprise, and there was a strong disposition to consider it extreme. That the final outcome should result in more than a quarter of a million bales in excess of the Bureau would at that time have been looked upon as absurd.

An open winter and favorable conditions for gathering the crop, with the added stimulus of remunerative prices contributed towards the increase, and while the Bureau fell short of the crop, it is to be congratulated on having been nearest to the actual results and having given to the farmers and the trade the most valuable and safest pointer.

In the "Other Gulf" and "Atlantic" States the first impressions of shortage were confirmed, though not to the extent anticipated, but none ever dreamed that Texas and Indian Territory would pile up so enormous a total as to exceed last year by over twelve hundred thousand bales and the bumper year of 1898-99 by more than a quarter of a million.

With all this the crop as a whole was a short one compared with the South's capacity, as shown by the yields of 1898-99 and 1897-98, and with a pressure of demand upon supply in face of serious complaints from manufacturers for many months and interruption of the China trade, the average values per pound and per bale exceeded last year's favorable results.

On the basis of middling, which represents the average of the crop, a fair average of price for the United States is 9.33 cents per pound, which compares with 7.65 cents for last year and 4.88 for 1898-99, the highest price touched during the season having been 11.12 and the lowest 7.56.

#### Value of the Crop.

The average commercial value of the crop is \$47.63 per bale, against \$38.55 last year, \$25.08 the year before and \$28.62 in 1898-99.

The total value of the crop compares with the previous five years as follows:

	Bales.	Value.
1900-1901.....	10,383,422	\$494,567,549
1899-1900.....	9,436,416	363,784,820
1898-99.....	11,274,840	282,772,987
1897-98.....	11,199,994	320,552,606
1896-97.....	8,757,964	321,924,834
1895-96.....	7,157,346	294,095,347
1894-95.....	9,901,251	297,037,530

This shows an increase in values over last year of \$130,782,729 and over the crop of 1898-99 (which was 891,418 bales greater) of \$211,794,562. When it is considered that the two past crops sold in the cotton States for \$858,352,369, their importance in bringing prosperity to the South may be fully appreciated.

#### Consumption by American Mills.

The year has not been a satisfactory one with American mills, either North or South. Prices of the raw material have ruled high compared with the manufactured article, cutting down the margin of profits until in many instances the balance has been on the wrong side. Complaints have been strongest among Northern and Eastern spinners, though the South, while its aggregate consumption increased, has had its share of the depression. This has been emphasized by contrast with last year's activity, with its record-breaking consumption.

The Chinese difficulties, which overshadowed the closing months of last season, continued to exert an unfavorable influence, and competition between Northern and Southern spinners in the home market was in consequence materially increased. Shorter time and lessened production was the result. During the past sixty days the outlook has brightened, though it is not all that could be desired.

The consumption of American cotton by Northern mills may be put at 2,650,000 bales. As they took 101,000 less than last year, they trenched on the 180,000 held by them on September 1, 1900, to the extent of 83,000 bales, leaving them with a present stock of about 97,000; or, to make it plainer, the comparative figures for the two years were (thousands omitted):

	This year.	Last year.
Northern mill stocks beginning of year.....	180	412
Takings.....	1,967	2,068
Supply.....	2,147	2,480
Consumption.....	2,060	2,300
Northern mill stocks close season.....	97	180

This does not include foreign cotton, the importations of which were practically all consumed and which amounted to an equivalent in American weights of 100,941 bales, against 130,590 last year (see details below).

In the South the increase of spindles continues at a rapid rate, but not to the phe-



nominal extent recorded last season, though the starting up of new mills included in last year's not completed list has exercised a sensible influence in more than offsetting the decreased consumption of the old mills in that section.

The yearly figures since 1890 are submitted as follows. The column of Northern mills shows "takings," while that of Southern mills comprises actual consumption:

Year ending August 31.	Northern mills. Bales.	Southern mills. Bales.	Total. Bales.	Crop. Bales.
1890.....	1,799,258	546,894	2,346,152	7,311,392
1891.....	2,027,362	604,661	2,632,023	8,652,597
1892.....	2,190,766	686,080	2,876,846	9,035,379
1893.....	1,687,286	743,848	2,431,134	6,700,365
1894.....	1,601,172	718,515	2,319,688	7,549,817
1895.....	2,083,839	862,838	2,946,677	9,901,251
1896.....	1,900,271	904,701	2,804,972	7,157,346
1897.....	1,804,680	1,042,671	2,847,351	8,757,964
1898.....	2,211,740	1,231,541	3,443,281	11,199,994
1899.....	2,190,095	1,399,399	3,589,494	11,274,840
1900.....	2,068,300	1,597,112	3,665,412	9,436,116
1901.....	1,966,897	1,620,931	3,587,828	10,383,422

It needs but a glance at these figures to show what Southern manufacturers have been to the cotton market this season and the influence they are destined to exert in the future. Eleven years ago, of the total takings, the North took 76.7 per cent, and the South 23.3; today the percentages are: North 54.8, South 45.2. And the trend of the spindle continues southward to the near neighborhood of the cotton field, where, in time, the largest percentage of the crop will be worked up into yarns and fabrics.

#### World's Consumption.

The consumption of American cotton on both sides of the Atlantic during the past year has been 10,161,000, against 10,995,000 last year and 10,759,000 the year before.

The importation of foreign cotton during the year amounted to 56,100,499 pounds, or an equivalent of 109,941 bales in American weights, against 65,833,514 pounds last year, equal to 130,590 American bales, a decrease equal to 20,649 bales.

The value of foreign cotton imported this year exceeds \$8,000,000.

Most of the imports were consumed by Northern mills, though I have reports of a small amount in the South, one new 10,000-spindle Southern mill consuming Egyptian cotton exclusively.

#### American Cotton Crop for Four Years.

(Year Ending Close of August.)

	1900-1901. Bales.	1899-1900. Bales.	1898-99. Bales.	1897-98. Bales.
Port receipts.....	7,698,452	6,734,364	8,575,426	8,769,360
Overland to mills.....	1,140,237	1,161,189	1,345,623	1,237,813
Southern consumption.....	1,620,931	1,597,112	1,399,399	1,231,841
Less taken by Southern mills from ports.....	10,427,620	9,492,665	11,320,448	11,239,014
Total crops.....	10,383,422	9,436,416	11,274,840	11,199,994
Exports:				
Great Britain.....	3,063,828	2,338,550	3,540,473	3,542,330
France.....	723,013	703,962	706,516	816,386
Continent and channel.....	2,745,917	2,967,580	3,017,415	3,180,164
Canada.....	102,523	109,951	99,986	118,567
Total exports.....	6,641,281	6,060,043	7,454,390	7,658,537
Stock close of year.....	240,534	88,132	397,162	175,411
Northern mill takings.....	1,967,570	2,068,300	2,190,095	2,211,740
Average gross weight of crop per bale, pounds.....	510.28	504.12	513.36	506.90

\*Including Mexico, Japan and China, details of which are given in Export Table.

#### COTTON CONSUMPTION OF THE SOUTH.

Census of Southern Mills, made up from Actual Returns of the Mills, for Year Ending August 31, 1901.

To say that the year has been a satisfactory one in the Southern cotton-milling industry would be the reverse of the truth, though the actual consumption of raw cotton has increased, reaching an aggregate ahead of all previous records. In this respect the result has been a surprise, as the universal impression was that "Southern consumption" would show a decrease of from 100,000 to 150,000 bales or more. The basis for this was reports from many of the largest mills which had gone on finer numbers and a reduction of hours in all directions by cutting off the night run. A factor not sufficiently allowed for, however, was the starting up of new spindles. Towards the close of last season a number of new mills had just commenced operations and a still greater number started up this year. It is true that of the latter most of them did not get under way until January or later, and some not even until May, June and July, so that nothing like their full force has been brought into play. Even as it was, however, these mills which started late last year and during this year added to the total consumption 128,000 bales. I have gone into this phase thoroughly, mill by mill, with the following results, showing cotton consumed by mills which started late last year and were not then fully under way and mills which were finally completed and started this year:

	Looms.	Spindles.	Bales.
Alabama.....	1,150	76,528	13,569
Arkansas.....	.....	3,000	290
Georgia.....	2,350	138,610	22,727
Kentucky.....	.....	4,650	1,514
Louisiana.....	.....	25,152	1,837
Mississippi.....	650	.....	.....
Missouri.....	.....	221,739	39,081
North Carolina.....	4,109	262,318	41,091
South Carolina.....	5,654	44,056	4,510
Tennessee.....	932	20,000	3,073
Texas.....	680	7,100	325
Virginia.....	.....	.....	.....
Total.....	16,085	803,153	127,927

So that we have a singular combination of facts by which is shown a heavy reduction in the consumption by mills in operation in both years which was more than offset by the bales used by factories newly brought into play. Thus there has been:

Total consumption this year.....	1,620,931
Less used by mills started this and late last year.....	127,927
Leaving consumption by last year's mills.....	1,493,004
Total consumption last year.....	1,597,112
Total consumption this year by same mills.....	1,493,004
Actual decrease in mills running both years.....	104,108

The dullness which affected operations during the closing months of last season was accentuated by the continuance of the Chinese troubles and the high prices of the raw material compared with those of manufactured goods, and while many mills shortened time early in the commercial year or changed to finer numbers, it was not

until after the first of January that most of the factories stopped night work, seriously affecting the amount of cotton consumed.

The causes which affected the South are temporary in their nature; in fact, the situation has improved within the past month or so, although it is not what could be desired. The August, 1901, consumption, as reported to me by the mills, reached 140,838 bales, which is at the rate of 1,690,000 per annum. Had all the mills run as they did last year, including the new concerns in operation, their consumption would have reached about 1,725,000 bales, and with anything like fair trade, that amount should be exceeded during the coming season.

New mills are still being erected at a rapid rate, though the additions do not stand comparison with last year's phenomenal results.

As stated in my last annual report, "Year by year old and antiquated concerns have been dismantled or remodeled, and the Southern cotton factories of today are of the newest and latest improved machinery, capable of performing the best and greatest amount of work at a minimum cost."

How the industry has advanced is best told by the following showing for the past eleven years. The yearly net additions are new mills less deductions on account of burnt, dismantling, etc.:

Total mills in the South consuming raw cotton September 1, 1890 (old, new and not complete)	336
1890-1, net additions.....	4
1891-2 ".....	16
1892-3 ".....	13
1893-4 ".....	17
1894-5 ".....	49
1895-6 ".....	40
1896-7 ".....	7
1897-8 ".....	9
1898-9 ".....	59
1899-1900 ".....	113
1900-1901 ".....	25

Total mills in the South consuming cotton (old, new and not completed), September 1, 1901..... 688

an increase since 1890 of 352 mills. I have used the words "mills consuming cotton" because there are factories known as woolen mills, each consuming considerable raw cotton annually and which naturally are classed as cotton consumers.

In this connection the record of spindles since 1890 may prove of still more interest:

1890.....	295,359
1870.....	338,890
1880.....	561,390
1895.....	1,819,291
1900.....	3,177,310
1901.....	6,531,894

Annexed figures show interesting and valuable details which speak for themselves, viz.:

The roster of mills is as follows:

Total number last year.....	663
Crossed out and merged into other concerns.....	20
Burnt.....	3
New and uncompleted added to list.....	48

Total number cotton mills in the South..... 688

The record of spindles in the South shows:

	This year.	Last year.
Total in operation.....	5,580,232	4,801,320
Idle.....	105,448	47,346
New, not completed.....	846,214	1,418,497
Grand total.....	6,531,894	6,267,163

showing an increase of spindles, old, idle and not complete, over last year of 264,731 and a net gain of spindles at work of 778,912.

As indicated by the tables annexed, the total consumption in all the mills, old and new, for the year was 1,620,931 bales, against 1,597,112 last year and 1,399,399 for the season of 1898-99, an increase over last year of 23,819 and over the year before of 221,532. The changes in each State as compared with last year were as follows:

	Gains. Bales.	Losses. Bales.
Alabama.....	16,435	.....
Arkansas.....	.....	651
Georgia.....	15,389	.....
Kentucky.....	107	3,554
Louisiana.....	1,753	.....
Mississippi.....	783	.....
Missouri.....	.....	708
North Carolina.....	13,340	.....
South Carolina.....	.....	2,340
Tennessee.....	.....	5,052
Texas.....	.....	11,683
Virginia.....	.....	.....
Totals.....	47,807	23,988
Total net gain.....	23,819	.....

#### Average Consumption per Spindle by Southern Mills.

The average consumption per spindle in the mills in operation (which is the smallest yet recorded for the South) has been 18.81 pounds less than last year and 20.74 less than the year before, due to shorter time and finer numbers.

The comparisons for the past ten years are annexed:

	Pounds per spindle.
1900-1901.....	135.77
1899-1900.....	154.58
1898-99.....	162.51
1897-98.....	155.66
1896-97.....	140.16
1895-96.....	142.67
1894-95.....	164.45
1893-94.....	147.60
1892-93.....	160.30
1891-92.....	160.60

The course of consumption since 1889-90 is shown at a glance as follows:

	Consumption. Bales.	Increase.	Decrease.
1889-90.....	546,894	.....	.....
1890-91.....	604,661	57,767	.....
1891-92.....	686,080	81,419	.....
1892-93.....	743,848	57,768	.....
1893-94.....	718,515	.....	25,333
1894-95.....	862,838	144,323	.....
1895-96.....	904,701	41,863	.....
1896-97.....	1,042,671	137,970	.....
1897-98.....	1,231,841	189,170	.....
1898-99.....	1,399,399	167,558	.....
1899-1900.....	1,597,112	197,713	.....
1900-1901.....	1,620,931	23,819	.....

Net Increase since 1890 of 1,074,037 bales.

## Southern Cotton Mills in 1900-1901.

The following tables give the condition of Southern mills in 1900-1901:

Mills.	Total.	In operation.		Idle.	New, not completed.
		Old.	New.		
Alabama.....	62	56	1	5	5
Arkansas.....	6	3	..	1	2
Georgia.....	131	113	3	6	9
Kentucky.....	9	9	..	..	..
Louisiana.....	8	4	..	2	1
Mississippi.....	17	16	..	..	..
Missouri.....	3	3	..	..	..
North Carolina.....	1247	228	90	11	11
South Carolina.....	137	128	1	6	6
Tennessee.....	34	29	..	..	..
Texas.....	17	10	..	..	..
Virginia.....	17	13	..	3	1
Total.....	685	612	6	28	42
Last year.....	663	501	9	18	135

\*Including mills commenced this year and those under this head last year not yet completed.

†Including one mill which uses Egyptian cotton exclusively.

Looms.	Active.	Idle.	Not complete.	Total.
Alabama.....	11,632	..	1,008	12,640
Arkansas.....	204	72	150	426
Georgia.....	23,085	389	3,708	27,173
Kentucky.....	954	..	400	1,354
Louisiana.....	1,534	104	230	1,868
Mississippi.....	2,871	..	486	3,357
Missouri.....	356	..	..	356
North Carolina.....	32,601	90	3,346	36,027
South Carolina.....	49,573	192	7,915	57,680
Tennessee.....	4,154	..	..	4,154
Texas.....	1,102	633	638	2,373
Virginia.....	4,925	670	..	5,595
Total.....	132,991	2,131	17,881	153,003
Last year.....	121,923	723	27,613	150,259
Year before.....	104,446	2,738	13,636	120,820

Spindles.	Total.	In operation.		Idle.	New, not completed.
		Old.	New.		
Alabama.....	665,867	560,379	2,500	..	102,988
Arkansas.....	25,760	14,260	..	3,000	8,500
Georgia.....	1,208,405	1,014,661	2,080	19,506	172,158
Kentucky.....	68,654	53,654	..	..	15,000
Louisiana.....	74,902	61,302	..	5,000	8,600
Mississippi.....	121,596	101,596	..	..	20,000
Missouri.....	13,754	13,754	..	..	..
North Carolina.....	1,636,963	1,494,973	5,000	11,050	186,840
South Carolina.....	2,122,258	1,804,252	5,000	10,178	302,828
Tennessee.....	198,522	188,886	..	19,636	400
Texas.....	100,284	50,956	..	20,428	28,900
Virginia.....	224,529	207,879	..	16,650	..
Total.....	6,531,894	5,565,652	14,580	105,448	846,214
Last year.....	6,267,163	4,762,929	38,400	47,346	1,418,497
Year before.....	4,562,092	3,948,750	50,896	129,092	823,354

\*Including spindles added to old mills less spindles thrown out during year, and new, not complete, mills of last year which started operations this season.

†Includes spindles being added to old mills as well as those in new concerns.

## Southern Cotton Consumption.

(Actual figures reported by the Mills.)

States.	*No. mills.	†Looms.	‡Spindles.	1901.	1900.
Alabama.....	57	11,632	562,879	164,357	147,922
Arkansas.....	3	204	14,260	1,729	2,380
Georgia.....	116	23,085	1,016,741	354,499	339,110
Kentucky.....	9	954	53,654	23,985	27,539
Louisiana.....	4	1,534	61,302	16,527	16,420
Mississippi.....	16	2,871	101,596	24,303	22,506
Missouri.....	3	356	13,754	4,931	4,148
North Carolina.....	229	32,601	1,499,073	434,978	435,686
South Carolina.....	129	49,573	1,809,252	510,486	497,146
Tennessee.....	29	4,154	188,886	35,407	37,747
Texas.....	10	1,102	50,956	12,985	18,037
Virginia.....	13	4,925	207,879	36,744	48,427
Totals.....	618	132,991	5,580,222	1,620,931	1,597,112

Less consumed and taken from Southern seaports, and included in port receipts..... 44,198 56,249

Net consumption to be added to crop..... 1,576,733 1,540,863

\*Mills in operation only. For total in South see other table.

†Employed in mills in operation. For total spindles in South see other table.

## Consumption—United States.

	1900-1901.	1899-1900.
Total crop United States.....	10,383,422	9,436,416
Stocks at ports beginning of year.....	88,132	397,162
Total supply.....	10,471,554	9,833,578
Exported during year.....	6,538,738	5,950,092
Sent to Canada.....	102,323	109,351
Burnt at delivery ports.....	1,238	19,591
Stock at close of year.....	240,534	88,132

Total takings for consumption, United States..... 3,588,501 3,665,412

Of which—

Taken by spinners in Southern States—total..... 1,620,931 1,597,112

Taken by Northern spinners..... 1,967,570 2,068,300

## Arkansas' Coal Fields.

[Special Cor. Manufacturers' Record.]  
Fort Smith, Ark., September 6.

The development of the great coal field around Fort Smith has fairly started in Arkansas and the Indian Territory, and the prospect is that the output during the coming winter will be enormous compared with what it has been. All the large operators have increased their capacity. The Prairie Creek Coal Co. at Huntington will be operating in not less than three different shafts, each of over 1000 tons capacity daily. This company has also purchased the Quita mines, in Pope county, which yield the finest anthracite coal. The Kansas & Texas Coal Co., which is operating in both Huntington and Hartford, of this county, will mine about 2000 tons daily in each of its shafts. The Bolin Coal Co. at Hartford is a new enterprise, but its capacity is about the same as the Kansas & Texas. The Central Coal & Coke Co. of Jenny

Lind mines about 2500 tons daily. The Central Coal & Coke Co. of Bonanza is about 2000 tons daily. These are the largest operators of Sebastian county. The smaller operators who have begun lately are the Red Rock Coal Co., the M. K. Coal Co. and the Montreal Coal Co. Their capacity is about 250 tons daily. At Spadra, Johnson county, the Johnson County Coal Co. has lately commenced operations. In Logan, Franklin and Pope counties, where the semi-anthracite and anthracite coal is located, operations are active all over that section.

In the Choctaw Nation, adjoining Fort Smith, coal mining has become general all along the lines of the railroads, especially in the following towns: Harts-horn, Krebs, Lehigh, Carbon, Doubleday, Dawson, Alderson, Wilburton, Coalgate, Howe, Dow, Panama, Poteau, Haileyville, McAlester, Buck, Cavanal, Savana, Hughes, Atoka, Sutter, Wister and Fan-

shaw, all in the Choctaw Nation. The Fort Smith & Western Railroad, which is being pushed rapidly westward from this point, will soon open some eight or ten new coal leases on its line.

Coal-land deals are an everyday occurrence. Messrs. J. M. Cravens, Allen Kennedy and others of this city have organized a large syndicate, and will operate a mine on a very extensive scale within one and one-half miles of our city limits. Another large syndicate is acquiring title to about 14,000 acres of coal land within twenty miles of this city in this county.

The coal product in the western part of the State being smokeless, recommends it for the use of cities and the navy.

## SHIPBUILDING AT NORFOLK.

Plans for an Extensive Undertaking Well Advanced.

Plans are now being formulated for the establishment of an extensive and important enterprise at Sewell's Point, Norfolk, Va. This will be a complete shipbuilding plant, including modern equipment of every character necessary, marine railways and dry-docks. Mr. C. W. Tebault is promoting the enterprise, and has gone North to complete the final arrangements, and hopes to commence the work of construction very soon. Mr. Tebault informs the Manufacturers' Record that quite a number of men of national reputation are interested in the enterprise, and that the company will be incorporated, with capital stock of \$2,000,000, and will be bonded for \$1,000,000. About 500 acres of land have been secured for the site. The Norfolk Shipbuilding & Dry-Dock Co. will probably be the title of the new concern.

It has been announced during the week that another extensive shipbuilding plant will be located at Norfolk, Va., and that \$1,000,000 has already been subscribed to ensure the enterprise. Further statements are to the effect that thirty acres of land at Port Norfolk have been bought for the purpose. Mr. J. A. C. Groner is promoting the project, and has gone to New York, Boston and Bath, Maine, to complete the final details, so that work of construction can be commenced in the near future, and is credited with having stated that some of the necessary construction contracts have been placed.

## Rolling Stock for Southern Pacific.

Several weeks ago the Manufacturers' Record published a statement from Mr. C. M. Hays, president of the Southern Pacific Company, to the effect that improvements were under consideration which would represent a total outlay of over \$25,000,000. Apparently a portion of the improvements have been decided upon, as a dispatch from San Francisco states that the company has ordered a number of vestibuled passenger cars, also a large quantity of other rolling stock, which will include 2000 flat cars, 500 cars for live-stock, 1250 for miscellaneous freight and 400 coal cars. It is understood that 1000 of the flat cars will be built in shops at Sacramento, Cal., and New Orleans.

## Extensive Electric Project.

In a letter to the Manufacturers' Record Mr. L. H. Lancaster, one of the promoters of the electric railway which will connect the towns of Thibodaux, Houma and Donaldsonville, states that the entire length of the road will be 130 miles, including branches. The company expects to award contracts within the next three months. Preliminary surveys have already been made for a portion of the route, and a part of the right of way has been secured.

## FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

## Coal for France and Switzerland.

The possibility of increasing the exports of American coal continues to be a topic of interest with consuls in Europe. According to the report of Mr. Frank H. Mason of Berlin, it is probable that large quantities of this fuel will be shipped annually to Northern France and Switzerland for an indefinite period. Mr. Mason states that railroad and manufacturing companies have been testing Southern and other coal with very satisfactory results, and that one of the French ports will probably be equipped with coal-transferring machinery for the purpose of unloading it economically, also equipment for making briquettes of the dust and slack, which have a commercial value. The French railway companies have made a special reduction in the freight rates on coal to Switzerland, which, it is believed, will further encourage such imports.

## Export Business of Illinois Central.

Mr. J. T. Harahan, vice-president of the Illinois Central Railroad, who has recently returned from abroad, has been examining the terminals of the Central at New Orleans, and states that indications point to a great increase in export business. According to Mr. Harahan, no difficulty has been experienced in making arrangements for the necessary steamships to load all of the freight which can be handled at New Orleans. As already stated in the Manufacturers' Record, the Illinois Central has let contracts for about 2500 freight cars of various kinds, and it is expected to have these completed during the present year. They will be used largely on the Southern lines of the system, and will include 1500 box cars, 300 refrigerator cars and 300 furniture cars.

## Chinese Exports Increasing.

Recent figures compiled by the Bureau of Statistics indicate that export trade with China is assuming its normal conditions, and that the empire is recovering from the depression caused by the political disturbances. The statistics show that exports of cotton cloth for the month of July aggregated \$1,710,000, nearly double the value of the goods exported during July, 1900. As much of this material is manufactured by Southern mills, the benefit of the revival to the South is apparent. Another interesting fact is that 6,369,000 gallons of oil were sent to China, compared with 2,459,000 gallons during the corresponding month of 1900.

## Trade With Syria.

In a letter to the Manufacturers' Record Joseph A. Moussalli of Aleppo, Syria, writes:

"The articles which have an important sale in this country are copper, bar iron, bar tin and tinplates, cotton yarns, cotton gray cloth called tea cloth and printed cloths, as also gray and bleached shirtings. Two of the leading articles exported from here to America are licorice roots and washed wool."

Mr. Moussalli imports from Great Britain, and he adds that many articles are imported from that country and from France, Germany, Italy, Austria and Switzerland.

Exports through Mobile to Cuba during the past year were valued at \$4,579,077.



## RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

## Norfolk &amp; Western Report.

Continued prosperity is indicated by practically every portion of the Norfolk & Western Railway report for the year ending June 30 last. While but eight miles more have been operated—1560 miles in all—the gross earnings aggregated \$15,786,000, an increase of \$1,635,000. This is largely due to the freight revenue, which increased \$1,461,000. Deducting fixed charges and expenses of every kind, a balance of \$2,603,000 is left after taking out a dividend amounting to \$645,000. During the year \$1,781,000 were appropriated for betterments, including extraordinary expenses of \$250,000 to repair damages by flood. It is an interesting fact that the operating expenses were but 57.25 per cent. of the gross earnings, one of the lowest percentages shown by any railroad company in the world. From a financial standpoint the condition of the company is very prosperous. It now has a surplus amounting to \$2,634,000, having added \$822,000 during the year under consideration.

In connection with the report Mr. Henry Fink, president of the company, presents a table giving a comparison of the earnings and expenses from 1898, the first year after the reorganization, with the year just closed. The table shows an increase of 40 per cent. in gross revenue since the reorganization and nearly \$3,000,000 in net earnings, actually a gain of 89 per cent. compared with 1898. This showing is made in spite of the fact that very extensive improvements have been made along the entire system, and is also an indication of the condition of the industries upon which the company depends for the major portion of its traffic.

## May Extend to Birmingham.

The Southern Railway Co. is about to begin work on a line thirteen miles long, which will extend from a connection with the Mobile & Ohio division, terminating at the property of the Central Iron & Coal Co. in Alabama. The road will be known as the Warrior Southern Railroad, but when completed may form a portion of a branch of the Southern into Birmingham. It is understood that the company has been considering such a line for some time past, and had surveys made with a view to ascertaining the most feasible route. Before passing into the control of the Southern a plan was agitated of extending the Mobile & Ohio to Birmingham and forming a new route between this city and points west of the Mississippi river, as well as the Warrior river mineral district.

## Important Carolina Line.

The Washington & Plymouth Railroad, upon which work was begun several months ago in North Carolina, is rapidly nearing completion, and it is expected that train service will be in operation between these towns in a few weeks. Track has been laid a distance of twenty-eight miles. The road is being constructed by Norfolk and New Jersey capitalists. E. A. Armstrong of Camden, N. J., is president; W. H. Whaley, vice-president, and R. Cohen of Norfolk, secretary, of the company. The line will open up a section of Tidewater North Carolina which at present has no railroad facilities. At Washington connection will be made with steamers on the Pamlico Sound and at Plymouth with steamers on Albemarle Sound. The total length of the road is thirty-five miles.

## An Extensive Project.

A dispatch from Augusta, Ga., states that the Atlantic & Gulf Shortline Railroad Co. has made arrangements to complete a road from Midville, on the Central of Georgia system, to St. Andrew's Bay, on the Gulf coast of Florida, an estimated length of 335 miles. The route as surveyed is by way of Augusta. The company controls a line now in operation between Midville and a point near Swainsboro, while an extension has been graded nearly to Augusta. The company has given a mortgage to the Knickerbocker Trust Co. of New York to secure bonds to the extent of \$4,000,000 to finance the enterprise. W. O. Taft is president, and George Ketchum, treasurer, of the railroad company.

## A Double-Track Route.

With the extensions now being constructed by the Illinois Central and others proposed, it is believed that it will have practically a double track the entire distance between Chicago and New Orleans within the next two years. A mileage in Kentucky is now being completed, which will give it an extra track between Chicago and Fulton, a distance of 406 miles, while considerable work of this kind is being done in Mississippi, as already stated in the Manufacturers' Record.

## Carolina &amp; Northwestern.

The Carolina & Northwestern Railway Co. is letting contracts for the construction of about twelve miles of line near Lincolnton, N. C., to reach cotton mills in this vicinity. It is now engaged in changing the road from narrow to standard gauge, and is laying 60-pound rails. President William A. Barber, in a letter to the Manufacturers' Record, states that an extension north of Lenoir, N. C., the present terminus, is under consideration, but that no decision has been reached.

## To Enter St. Louis.

A dispatch from St. Louis, Mo., is to the effect that the Atchison, Topeka & Santa Fe Company is making preparations to enter St. Louis on its own tracks. It is stated that the company will purchase a road now in operation between Kansas City and Clinton, Mo., and use what is known as the St. Louis, Kansas City & Colorado Railroad, being constructed between St. Louis and Clinton.

## Railroad Notes.

The Mutual Railway, Light & Power Co. of Delaware has been organized to represent the consolidation of the railway lines of Chattanooga, Tenn.

The Plant Railway & Steamship Co. has secured additional wharf property at Savannah, which it will use for handling freight to the North and other points.

The shops of the Louisville & Nashville Railroad Co. at New Decatur, Ala., have begun work upon a large order for rolling stock. It includes 700 box cars, 250 flat cars and 250 coal cars. The plant is now employing about 1800 men and running on full time.

The owners of the street-railway system in Mobile have arranged a consolidation of the companies known as the Mobile Street Railway Co. and Mobile Light Co. The Mobile Gaslight & Coke Co. and the Mobile Electric Light Co. are now included.

Relative to the present report that the Norfolk & Western Railway Co. has decided to build an extension from Bristol to Knoxville, Mr. Henry Fink, president of the company, informs the Manufacturers' Record that the statement is without foundation.

## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

## The Loray Mills

Announcement was made some weeks ago of the intention of the Loray Mills of Gastonia, N. C., to obtain a new charter. This charter has been granted in Maine, that State giving the liberal provisions that the company desired. The Loray Mills is a \$1,500,000 enterprise, and its plant will include, when fully completed, an equipment of 50,244 ring spindles and 1580 looms. This machinery is now being put in position, and half of it is expected to be in operation by November. Permanent officers have not been elected as yet, but Messrs. Geo. A. Gray and John F. Love have entire charge. This plant will employ 500 hands.

## To Spin Fine Yarns.

The Elizabeth Mills, which are being built at Charlotte, N. C., will spin from 40s to 80s, and for the present all of the product will be carded yarns. Floor space has been left for the addition of combers, and later on, if the conditions warrant it, the company will put in combers, and with a few slight changes and additions go to still finer counts, even to 100s, if the market justifies. The long season of rainy weather has delayed the completion of the plant, but R. M. Miller, Jr., the president, writes that he hopes to begin operations in November.

## The Cotton Movement.

In his review for the first week of the new cotton season Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight for the week ended September 6 was 77,171 bales, an increase over the same period last year of 569 bales. Exports were 43,843 bales, an increase of 27,820 bales; takings by Northern spinners 9672 bales, an increase of 4803 bales; by Southern spinners 31,000 bales, an increase of 4857.

## Doubling Harmony Grove (Ga.) Mills.

The stockholders of the Harmony Grove (Ga.) Mills met during the past week and increased capital stock from \$200,000 to \$300,000. The additional \$100,000 is to be expended to double the plant, an action that was announced some weeks ago as definitely decided upon. The mill now has 4160 spindles and 156 looms. It is said that the enlargement will provide for increase to 10,000 spindles. Contract for improvements has been let.

## Textile Notes.

The Rosenau Hosiery Mills of Tuscaloosa, Ala., will build forty cottages for its operatives.

It is reported that W. S. Dennie of Richmond, Va., will locate a \$75,000 cotton mill at Gainesville, Texas.

The Dublin (Ga.) Cotton Mills will issue bonds for \$50,000, though for what purpose has not been stated yet.

Dallas Manufacturing Co. of Huntsville, Ala., has closed contract to supply a firm in Southern China with 1200 bales of cotton sheeting at \$60 per bale.

Messrs. W. A. Martin & Co. have com-

pleted their plant at Roanoke, Va., for the manufacture of tobacco bags. Daily capacity is 50,000 bags, about 100 operatives being employed.

H. T. Crosby of Greenville, Miss., proposes the organization of a \$25,000 stock company to establish a knitting mill and cotton-rope manufactory. Subscriptions are now being solicited.

The mayor of Americus, Ga., has received a proposition from a company that desires to remove its cotton factory to a point farther South. The plant is said to be now located in Virginia, and worth about \$75,000.

Marion Butler writes that he does contemplate erecting the cotton mill proposed at Elliott, N. C., recently mentioned, but that no definite arrangements have been made. Mr. Butler's offices are in the Tucker Building, Raleigh, N. C.

The proposed cotton factory for location at Carrollton, Ala., mentioned last week, may be the removal of the Birmingham (Ala.) Cotton Manufacturing Co.'s plant. A proposition to this effect has been made and John T. Cochran is endeavoring to form a \$50,000 company to secure the mill.

## QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, September 10.

No. 10s-1 and 12s-1 warps.....	13 @
No. 14s-1 warps.....	13 1/2 @ 13 3/4
No. 16s-1 warps.....	14 @
No. 20s-1 warps.....	14 @ 14 1/2
No. 22s-1 warps.....	14 1/2 @
No. 26s-1 warps.....	15 @
No. 6s to 10s bunch yarn.....	12 1/2 @
No. 12s-1.....	13 @
No. 14s-1.....	13 1/2 @
No. 16s-1.....	14 @
No. 20s-1.....	14 1/2 @
No. 22s-1.....	14 1/2 @
No. 26s-1.....	15 @ 15 1/2
No. 8s-2 ply soft yarn.....	12 1/2 @ 13
No. 10s-2 ply soft yarn.....	13 @ 13 1/2
No. 8s-2 ply hard.....	12 1/2 @ 13
No. 10s-2 ply hard.....	13 @
No. 12s-2 ply hard.....	13 @ 13 1/2
No. 14s-2 ply.....	13 1/2 @
No. 16s-2 ply.....	14 @
No. 20s-2 ply.....	14 1/2 @
No. 24s-2 ply.....	15 @ 15 1/2
No. 26s-2 ply.....	15 @ 15 1/2
No. 30s-2 ply yarn.....	16 1/2 @ 17
No. 40s-2 ply.....	22 @ 23 1/2
No. 8s-3, 4 and 5 ply.....	12 1/2 @
No. 20s-2 ply chain warps.....	14 1/2 @ 15
No. 24s-2 ply chain warps.....	15 1/2 @ 16
No. 26s-2 ply chain warps.....	16 @
No. 30s-2 ply chain warps.....	17 @ 17 1/2
No. 16s-3 ply hard twist.....	14 @
No. 20s-3 ply hard twist.....	14 1/2 @ 15
No. 26s-3 ply hard twist.....	15 1/2 @

## Cottonseed-Oil Notes.

The foreign exports of cottonseed cake and meal from the port of Galveston for August amounted to 2030 tons, and for eleven months ending July 31 to 252,083 tons, making a grand total for the commercial year of 254,113 tons.

The market for cottonseed oil in Texas closed nominally steady for cottonseed oil. There was a better export demand for cake and meal, which was quoted \$21 to \$21.50 per ton delivered at Galveston. Hulls, baled, were quoted at \$5 per ton.

The foreign exports of cottonseed cake and meal from the port of New Orleans for August amounted to 5465 tons, and for the eleven months ending July 31 to 200,731 tons, making a grand total for the commercial year of 206,196 tons.

It is reported that the Southern Cotton Oil Co. of Houston, Texas, is about to establish an agency at Wharton, Texas, for the purchase of cotton in the seed. The cotton will be ginned and sold at Wharton and seed shipped to the Houston warehouse.

The Laurinburg Cotton Oil Co. of Laurinburg, N. C., is just completing a large ginnery and a 40-ton cottonseed-oil plant. The gin was started up last week, and the oil mill is about ready to commence operations. Mr. J. A. Jones of Laurinburg is general manager for the company.

The leading cottonseed men of Louisiana and Mississippi met in New Orleans

on the 4th inst. to fix the price of cottonseed for this season. The price agreed on was 13 cents free on board river, with the usual rebate of one cent per sack, equal to a rate of 12 cents free on board rail. This is a much lower figure than the farmers received for their seed last year.

It is stated that Dr. Simmons of Oakville, Texas, has just let the contract and work has already commenced on the erection of a cottonseed-oil mill, the machinery for the plant having already been selected. Dr. Simmons has chosen the site for his mill on his ranch near Oakville, in Live Oak county, where he will feed his large herd of cattle on the cottonseed hulls and meal.

The following are the official quotations of cotton and cottonseed products as posted at the New Orleans Cotton Exchange on the 9th inst.: Prime refined oil in barrels, per gallon, 36 cents; off refined oil in barrels, per gallon, 35 cents; prime crude oil, loose, per gallon, 30 cents; prime cottonseed cake, per ton of 2240 pounds, \$24.50; prime cottonseed meal, per ton of 2240 pounds, \$24; soap stock, per pound, 1 cent; linters, choice, per pound, 3 3/4 cents; A, 3 1/2 cents; B, 3 1/4 cents; C, 3 cents; cottonseed in sacks delivered at New Orleans, per ton of 2000 pounds, \$10; in bulk delivered at New Orleans, per ton of 2000 pounds, nominal.

#### Southern Hardware Jobbers.

The Southern Hardware Jobbers' Association has issued a list of the individuals and firms in its membership. This shows twelve members in Alabama, seven in Arkansas, one in the District of Columbia, two in Florida, fifteen in Georgia, one in Indian Territory, three in Louisiana, two in Mississippi, three in North Carolina, one in South Carolina, eleven in Tennessee, ten in Texas and eight in Virginia. The officers of the association are: President, J. D. Moore of Birmingham; vice-presidents, F. A. Heitmann of Houston, Texas, and Bruce Keener of Knoxville, Tenn., and secretary-treasurer, C. B. Carter of Knoxville.

#### Kentucky Asphalt.

The Federal Asphalt Co., with a capital stock of \$5,000,000, has been organized to develop asphaltum beds in Hardin, Grayson, Edmondson, Hart and Warren counties, Kentucky, according to the Louisville Courier-Journal. A plant is under construction which will employ 300 men, and nearly \$1,000,000 will be expended in machinery. The Illinois Central Railroad runs close to many of the most valuable deposits, a local railway four miles long touches one of the largest, and another road is being surveyed in the same territory. It is estimated that the area of the deposits is 6664 acres.

During August the dock board of New Orleans provided for improvements costing more than \$50,000.

The total shipments of lumber from the port of Savannah, Ga., for the commercial year ending August 31, 1901, amounted to 147,863,429 feet, of which 123,809,763 feet were coastwise and 14,095,000 feet foreign, against total domestic and foreign shipments in 1899-1900 of 146,923,223 feet.

Karl Kethel of New York, representing German capitalists, has purchased 353 acres of land near Ellenboro, N. C., whereon are deposits of monazite sand. This sand will be mined and then shipped to Hamburg, Germany, for concentrating and preparing for the market, a manufactory to utilize the sand having been built in that city. The operators will establish their main office at Nuremberg, Bavaria.

## PHOSPHATES.

### Phosphate Markets.

Office Manufacturers' Record,  
Baltimore, Md., September 11.

The local phosphate market has ruled quiet during the week, in sympathy with the course of the market in other fertilizer ingredients. Manufacturers are not disposed to purchase in large lots, but sales that are reported are at good prices. There is considerable strength in Tennessee phosphate rock, owing to the favorable situation in the mining section at Mt. Pleasant. Reports from the Tennessee phosphate mines are favorable, and the market during the past week has ruled strong, with a good business in domestic grades. Seventy-five per cent. rock at the mines is quoted at \$2.75 to \$2.85 for prompt and \$2.85 to \$3 for 1902 delivery; 78 per cent. rock for early shipment \$3.50, and for 1902 delivery \$3.75 to \$4. The movement in South Carolina is looked upon more favorably, there being considerable rock going to foreign ports, while mining in the Ashley river and other points is being vigorously pursued. The market is reported very steady at previous quotations. Shipments of hard rock from the Florida ports for August were better than usual, and from the number of charters reported the business for September will be materially increased. In the pebble section the principal companies are getting out considerable rock, and the demand from abroad for both hard rock and pebble is said to be more decided, buyers being disposed to meet sellers' views. The following list of charters is significant as showing the movement at different points in the Southern phosphate field: British steamer David Mainland, 1201 tons, from Coosaw to Nantes with phosphate at 12/6, September; British steamer, 3000 tons D. W., from Tampa to Rotterdam with phosphate on private terms; British steamer Garlands, 1361 tons, from a Southern port to the United Kingdom with phosphate on private terms; Danish steamer Nordhvalen, 2121 tons, from Fernandina and Norfolk to Rotterdam and Landskrona with phosphate and general cargo on private terms, September, and British steamer Stag, 1302 tons, from Fernandina to United Kingdom or Continent with phosphate on private terms, prompt.

### Fertilizer Ingredients.

The local market for ammoniates has ruled quiet during the week, with few sales reported. Western producers are holding up the market by quoting only nominal prices, and thereby preventing a general decline, owing to the limited inquiry.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$2 70	6 1/2	2 7/8
Nitrate of soda, spot Balto....	1 85	6 1/2	1 50
Blood .....	2 22 1/2	6 1/2	2 25
Azotine (beef).....	2 35	6 1/2	—
Azotine (pork).....	2 35	6 1/2	—
Tankage (concentrated).....	2 17 1/2	6 1/2	2 20
Tankage (9 and 20).....	2 20	6 1/2	2 30 & 10
Tankage (7 and 30).....	20 00	6 1/2	21 00
Fish (dry).....	27 50	6 1/2	30 00

### Phosphate and Fertilizer Notes.

The British steamship Sanda, which recently arrived at Beaufort, S. C., has been chartered by the Central Phosphate Co. of that port to take a cargo of South Carolina phosphate rock for a French port.

Mr. Haton of Paris, France, who is resident superintendent at Beaufort, S. C., for the Central Phosphate Co., with headquarters in Paris, is at present in Florida, where, it is stated, his company has just purchased phosphate lands at an outlay of \$90,000.

The shipments of high-grade Florida phosphate rock from the port of Savan-

nah, Ga., for the month of August, as reported by Messrs. J. M. Lang & Co., were as follows: Bremen 1442 tons, Hamburg 2506 tons, Antwerp 1498 tons, Genoa 2194 tons, or a total of 7640 tons; previously reported 77,574 tons, making a total for eight months of 85,214 tons.

Phosphate shipments from the port of Fernandina, Fla., are expected to be very heavy for the present month. There was four large steamers in that port on the 7th inst. taking cargoes of rock, and three to five more are to arrive during September for full cargoes. The steamer Forest Brook cleared on the 4th with 3500 tons of phosphate rock and 3500 barrels of rosin.

It is reported that a deal of considerable importance to Nashville, Tenn., was consummated in Louisville, Ky., on the 5th inst., when the Tennessee Phosphate Co. was merged into the Globe Company of Louisville and the Jarecki Company of Sandusky, Ohio. It is stated that the new company will build a factory at Nashville and subordinate factories in Tennessee and other parts of the South. The officers of the new company are J. D. Stewart, president; Attila Cox, Oscar Fenley, J. M. Atherton and Harry Weisinger, all of Louisville, directors.

The shipment and dealings in high-grade Florida phosphate rock has been quite a feature in the general trade of the port of Savannah during past commercial year. The shipments of high-grade Florida phosphate rock from that port from September 1, 1900, to August 31, 1901, amounted to 138,504 tons. The prices of Florida high-grade rock fell off during the year from 50 cents to \$1 per ton as compared with the prices of the previous year. Present market quotations for Florida hard rock guaranteed 77 per cent. bone phosphate of lime, 3 per cent. oxide of iron and alumina and 3 per cent. moisture is about \$6.50 per ton of 2240 pounds f. o. b. vessel at Atlantic ports and about \$7 Gulf ports; 75 per cent. rock is about 50 cents to \$1 per ton less. The total shipments of hard rock from Florida during 1900 were approximately 350,000 tons, or a decrease of about 95,000 tons from those of 1899.

The Retail Lumber Dealers' Association met in Jackson, Miss., on the 3d inst. for discussion of matters pertaining to their business. A committee was appointed to go before the legislature and urge the passage of a lien law more favorable to lumbermen than those now on the statute-books.

The Messrs. Bond & Bond, who are operating a large saw-mill plant at Neega, Fla., have located another saw-mill at De Land, and will build a spur truck fifteen miles to tap their timber. It is stated that this firm has recently purchased 25,000 acres of valuable timber land between Neega and De Land.

One of the largest rafts of lumber ever constructed started on the 12th of August from Portland, Ore., bound for San Francisco. The raft is sixty-five feet long, draws twenty feet, and is twelve feet above the water. Some of the sticks are 120 feet long and twenty-two inches in diameter. The raft represents 7,200,000 feet of lumber.

The Tennessee Spoke Co., formerly of Union City, Tenn., which moved to Decatur, Ala., three years ago, will move back to Dyersburg, Tenn., about October 1. The supply of hickory timber suitable for the material turned out by the company has become exhausted in the Decatur section, hence the transfer of the company's plant.

## LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### LUMBER MARKET REVIEWS.

#### Baltimore.

Office Manufacturers' Record,  
Baltimore, Md., September 11.

A fairly active movement has been the rule in the local lumber market during the past week. The volume of business has, however, shown no expansion, but the demand seems steady, and numerous inquiries are being received which later on, it is hoped, will develop considerable trade. Manufacturers and dealers are disposed to look favorably on the future of the lumber market, and during the fall and winter months expect more than an average business. Holders are generally firm, and are not disposed to make concessions in order to effect sales. The North Carolina pine trade is said to be in good shape, and while receipts here are light, stocks are about ample for the demand. Some grades, however, are scarce, and prices throughout the list are well maintained. The movement in cypress is fair, and values are steady under a better demand. The white-pine trade is of average volume, there being some demand from out of town, as well as a fair local inquiry. Georgia pine is firmly held, with receipts moderate. The hardwood trade shows up more favorable in a local way, and there has been a very fair business so far this month with nearby towns. Furniture manufacturers and other woodworking concerns are buying more freely, and dry oak, ash and other commercial woods are in better shape, with prices a shade stronger than last week. The foreign export trade is not in any degree improved, and local shippers are not over-sanguine of any change for the better in the near future. The lumber markets of Europe are somewhat demoralized, and there is no relief expected before next spring. English buyers have not been eager to secure stock, but now that the fall is on, it is likely that sales will be better, or stocks will have to be carried over the winter months.

#### Norfolk.

[From our own Correspondent.]  
Norfolk, Va., September 9.

The situation in all departments of the lumber trade in this section is unchanged, and millmen generally are satisfied with the present outlook of the market, especially in North Carolina pine. The demand continues of a very substantial character, and both in air-dried and kiln-dried lumber the movement is active. Dressed lumber is in very brisk demand, and mills are generally fully supplied with orders, many working overtime. Stocks are generally light at all milling points, especially in high-grade lumber, and there is some difficulty in filling orders promptly. The foreign inquiry for North Carolina pine is fair, but at the moment only a few orders are being filled for continental ports. There is considerable lumber being disposed of in a local way, as the building demand is quite active at present. Numbers of fine residences are being erected at suburban points, and a large supply of lumber is also required for city improvements, while nearby towns are also purchasing freely, all of which tends to reduce the output of mills. The hardwood trade is in fair shape, there being a good inquiry for oak and ash. Furniture manufacturers are buying freely, and the various woodworking concerns are also taking considerable quantities. The foreign demand for hardwoods continues light. Among the various woodworking concerns here there is



considerable activity, all generally working at their full capacity. Lumber freights continue steady and vessels scarce. The schooner Sunlight was taken last week to load lumber for New York at \$2.75.

#### Savannah.

[From our own Correspondent.]

Savannah, Ga., September 9.

All indications point to a good substantial trade at this port in all wood products during the coming fall and winter months, and at the moment there is unusual activity among lumbermen, both here and at nearby Georgia ports. During the last six months the market for most grades and dimensions of lumber has shown a steady improvement, and recently there has been a much firmer tone to prices for long and difficult stuff, which grades are handled here with prompt dispatch, owing to superior port facilities. During the commercial year ending August 31, 1901, shipments of lumber amounted to 147,863,429 feet, of which 133,809,703 feet went coastwise and 14,053,726 to foreign ports, against 146,923,223 feet in 1899-1900. The present demand from Northern and Eastern sections is quite liberal, and from the charters reported recently some very heavy shipments will be made during the current month. The movement at Brunswick is quite as decided, and shippers are now doing a larger volume of business than at any time during the year. Sawmills at St. Simons and adjacent milling sections have all the orders they can handle, and the tone of the market at all interior points is of a very healthy character. Lumber freights continue very steady, and rates as reported in the following charters: Bark Daisy Read, 365 tons, and schooner Pepe Ramirez, 376 tons, from Brunswick to New York with lumber at \$5.75; schooner F. & T. Lupton, 797 tons, from Savannah to New York with lumber at \$6, and switch ties 18½ cents; schooner E. H. Symington, 881 tons, from Savannah to Portland with lumber at \$6.60, and schooner Thomas L. James, 376 tons, from Savannah to New York with lumber on private terms.

#### Mobile.

[From our own Correspondent.]

Mobile, Ala., September 9.

The lumber and timber trade in this section is quiet at present, and the demand is only moderate. Sawn timber when placed upon the market will bring 11½ to 11¾ cents per cubic foot, 40-foot basis, and hewn timber 12 to 12½ cents per cubic foot. Stocks of timber are generally light, and should an increased demand set in orders would be difficult to fill. Importers are not taking any large lots. The steamer Deptford cleared last week for Grinsby with cargo of 137,152 cubic feet, and several other lots are ready for shipment. The news from European ports is so far no more satisfactory than the conditions existing a week ago. The situation in local lumber circles is not by any means active, the principal demand coming from Cuba, nearly half a million feet going forward to that island last week. It is the opinion of a number of experts that the demand for lumber later on will be much more pronounced, and that the late fall and winter trade will improve materially. At Pensacola the situation is unchanged, and the volume of business moderate. Foreign exports of timber are light. Freights are quiet and steady. Charters reported are steamer Anselma de Larrinaga, 2634 tons, from the Gulf to Liverpool, Manchester, Greenock or Cardiff, two ports, with timber at 90/, prompt, and Norwegian bark Mattilde, 834 tons, from Apalachicola to Honfleur with timber at 117/6. Messrs. Fred. O. Howe & Co. of

Pensacola report the market as follows: "Freights continue exceedingly dull, with little demand; current rates for sail are £5 7s. 6d. to £5 15s. U. K. or Continent, £5 to £5 5s. Mediterranean. For South America there is little enquiry, and tonnage is obtainable at \$13.50 to \$13.75, Buenos Ayres; \$14.50 Rosario, clean charter, proportionately more \$2 form. Steam freights are £4 10s. to £4 15s. U. K. or Continent, according to port."

#### Memphis.

[From our own Correspondent.]

Memphis, Tenn., September 9.

The demand for the various hardwoods during the past week was of a fairly satisfactory character, the past week having witnessed shipments of good volume to Liverpool and points in Germany, South America and South Africa. Advices to leading firms here report a distinctly better feeling all around. The woods most wanted are the oaks, with special reference to plain white, ash and poplar, with some red gum for paving blocks. In domestic circles business is steadily expanding. There has been no particular change in the character of the demand. Stocks are generally plentiful, except in cypress, plain red oak and poplar. The cypress ready for shipment is being sent out on forward delivery contracts daily. Some of the larger mills here have their output of this lumber sold ahead for nearly a year. Poplar in the dressed stock is a ready seller, there being no more than enough of this particular class of stuff than the trade is able to absorb readily. It is also difficult to fill all orders in plain red oak, the stocks having been gone through with to such an extent that the finding of the thicknesses and lengths specified is a rather onerous piece of work. There is considerable accumulation in cottonwood. The mills belonging to the box manufacturers are all shut down now, while all the box factories in this city are running on full time, some of them double time. This cutting both ways—a shortening of the production and the increasing of the consumption of this wood—is expected to revive interest in it very soon. Prices are firm at figures ruling for the past several weeks. Buyers are less independent than they were a short time ago. The box manufacturers are entering upon their busy season, and the outlook is considered bright. Already the tight-cooperage manufacturers are at work on their oil-barrel contracts in anticipation of an early call for delivery for the handling of the cottonseed oil from the mills here. The molasses men are placing some orders, too, while the whiskey and distilleries are also in the market here. The slack stock men have little No. 1 stuff on hand, though an abundance of No. 2, because of the lateness of the apple crop, which is causing shippers to hold out of the market as long as possible. The building permits continue to run far in excess of all previous records, with the result that the soft-wood mills in this vicinity and woodworking plants of every description are being taxed to their utmost.

#### Beaumont.

[From our own Correspondent.]

Beaumont, Texas, September 7.

The tendency of the market during the past week was to advance the price on several items. Several new lists have made their appearance, showing advances of 50 cents to \$1 per 1000 feet on staple articles. The most marked development during the past week in the lumber business, however, has been the advance in the prices of timber. Heart ties are now quoted at \$12 to \$14 per M feet at the mill, while a year ago they could be bought for \$9.50 to \$10. Twelve-inch heart timber that used to sell for \$9.50 to

\$10 is now bringing \$12 to \$13, and finds ready sale at even these comparatively high figures. But it is not the abnormal demand altogether that is producing these high figures; it is the greatly increased cost of stumpage which is responsible for part of it. Stumpage now costs from \$2.50 to \$3 per M feet, whereas a few years ago it could be had from 50 cents to \$1 per 1000 feet. Then the increased cost of manufacture is a great factor in determining the selling price of lumber these days. It costs fully \$1 per M feet more to make lumber than it used to do. Business the past week from the country dealers has been very good. It is better today in Texas probably than in any other State in the Union. Crops, while not so promising as they were a year ago, are in good condition, with the prospects of good prices being realized therefor, and the farmers are buying freely. Added to this, the great industrial boom which Texas is now undergoing brings many a lumber order to the manufacturer's doors. Stocks are in as dilapidated a condition as ever; it does not look as if they would ever be rehabilitated this year. They are constantly decreasing. The present reports which are coming to hand for August show a decrease of about 5,000,000 feet for that month as against July stocks. The shortage is most keenly felt in boards and in rough clear lumber, from which planer stock is made. The timber business as a whole is exceedingly active, and a mill can now select any class of sawing desired for its mill. The railroad trade is the greatest consumer at the present time, their requirements in the aggregate being enormous. Ties are in splendid demand, while stringers, etc., can be sold a great deal faster than they can be cut. The export business shows little signs of improvement. There is a little better feeling prevailing, and cubic average of thirty feet has gone up to fifty shillings a load c. i. f. Liverpool, but this is not attractive to Texas mills. There is the same dullness in rough clears and primes for the continental markets, and little business is being transacted at the present time in this business.

#### Lumber Notes.

Receipts of lumber at the port of New Orleans last week amounted to 2,004,000 feet, and for the season 12,463,796 feet, against 13,723,121 feet last year.

The shipments of lumber from the port of Mobile, Ala., last week amounted to 631,088 superficial feet. The shipments of sawn timber were 137,152 cubic feet.

The plant of the Iberia Cypress Co. at New Iberia, La., which had been closed down for a week by a strike of the workmen, was in full operation again on the 8th inst.

The T. H. Rogers Lumber Co. of Kansas City, Mo., has been incorporated, with a capital stock of \$100,000. The incorporators are T. H. Rogers, Cyrus B. Sweet and W. L. Stocking.

The Sharpe & Mills Furniture Co. of Davidson county, Tennessee, has been chartered, with a capital stock of \$20,000. The incorporators are Percy Sharpe, A. C. Scuddy, John Hopkins, L. S. Mills and P. M. Estes.

The buildings for the Dekle-Jetton Lumber Co. at Tampa, Fla., are nearly completed. The machinery has arrived and is being placed, and it is expected that the big plant will be in full operation by the 15th of October.

The steamship Ethelbryhta arrived at Jacksonville, Fla., last week, and is now loading a cargo of crossies for Santiago, Cuba. This steamship is capable of carrying 80,000 crossies, but her present cargo will be about 35,000 to 40,000.

The Standard Chair Co. of Thomasville, N. C., has been incorporated, with a capital stock of \$25,000. The incorporators are F. S. Lambeth, E. W. Cates and J. W. Lambeth. The company will buy and sell timber and manufacture chairs and other furniture.

A representative of the J. M. Buck Lumber Co. of Johnson City, Tenn., has practically completed the purchase of 1000 acres of timber land from what is known as the Mont Gudger boundary in Madison county, North Carolina. The consideration was \$3300.

The East Coast Lumber Co. at Watertown, Fla., is adding a stove machine to its extensive lumber plant for the manufacture of staves for rosin barrels. The company will use part of its output of staves at its large turpentine farm, and the balance will be placed on the market.

The Strong Lumber Co., composed of Philadelphia capitalists, has purchased from the Boston Land Co. 6840 acres of timber lands near Bristol. The former company now owns over 75,000 acres of fine timber in that section, and will operate extensive lumber mills on its new property.

The Charlie Hill Lumber Co. of Tipton county, Tennessee, was incorporated last week, with a capital stock of \$7000. The incorporators are C. H. Hill, C. H. Hill, Jr., John Craig, W. A. Owen, B. W. Cocke, F. D. Crump and G. D. Gillespie. The company will buy, sell and manufacture lumber.

The De Soto Lumber Co. of Ashboro, N. C., has been incorporated, with a capital of \$100,000, \$12,000 of which has been paid in. The incorporators are E. C. Lassiter, W. J. Scarboro, P. H. Morris and C. L. Morris, all of Ashboro. The company will deal in and manufacture lumber, sash, doors, blinds and building material.

It is stated that the Kirby Lumber Co. has practically closed a deal for the purchase of the Beaumont Lumber Co. of Beaumont, Texas. The deal is the same as for the Reliance Lumber Co. and the Texas Tram & Lumber Co. A part of the purchase money has been paid, and the Kirby Lumber Co. is at liberty to take over the property whenever it sees fit to do so.

The Blades Lumber Co. at Elizabeth City, N. C., has been making many new improvements to its extensive plant. After adding a large shed and many machines, it is now constructing a system of shaving-blowing pipes, with which it can furnish the electric-light plant from a distance of 100 yards. Its planing mill is now about as complete as modern equipment can make it.

The tenth annual convention of the Concatenated Order of Hoo-Hoos assembled at Norfolk on the 9th. There were about 500 delegates from all over the country, who represent almost every phase of the lumber world. The convention was addressed by W. E. Stilwell of Savannah, who holds the office of "Snark of the Universe." The work of the convention extended over three days, and an elaborate program was arranged for the delegates and their wives and friends.

The following vessels cleared last week from Jacksonville, Fla., with full cargoes: Schooners R. C. McQuillien for Jersey City with 400,000 feet of lumber, M. V. B. Chase for Philadelphia with 300,000 feet and John C. Smith for New York with 300,000 feet; the Clyde Line steamer Seminole cleared for Boston with 450,000 feet of lumber, 5200 crossies, 460 packages of doors and other cargo, and the steamer Navahoe for Boston with 300,000 feet of lumber, 1150 crossies, 500 bundles of shingles and other cargo.

## MECHANICAL.

## An Improved Panel Board.

The new "G. I." Removable Enclosed Fuse Carrier Panel Board, manufactured

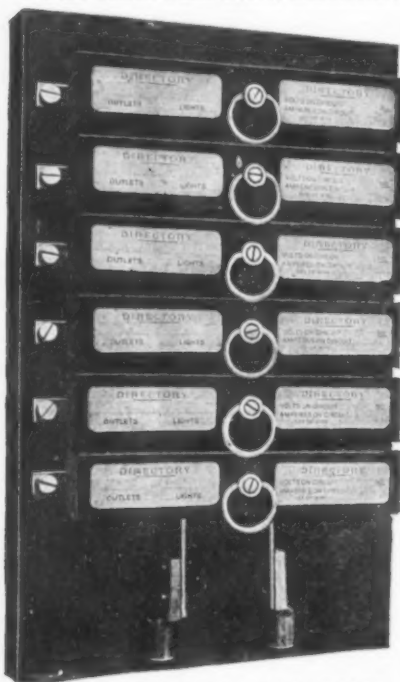


FIG. 1-IMPROVED PANEL BOARD.

ments in this class of work, embodying the inventions and designs of experts. A number of buildings have already been equipped with this new panel, which has not only received the unqualified endorsement of many prominent consulting engineers, but has equally commended itself to the wiring contractors who have installed them.

The distinctive features of the new panel include the circuit control. The circuits are controlled by a carrier which embodies all the functions of a knife switch, a removable fuse-holder and an enclosed fuse. To use the carrier as a switch it is merely pulled out by means of the ring handle at the top, when it opens the circuit. To close the circuit the carrier is merely pushed in again. The mechanical means for effecting these operations are the simplest.

The hands of the operator cannot touch any live part when the carrier is operated as a switch, thus rendering it entirely safe. To renew a fuse the carrier is removed by simply taking out a screw, making a removable fuse-holder which can be re-fused in the most convenient position, namely, away from the panel. Thus the risk of short circuits or any other trouble by having a screwdriver near the metal parts or having the operator handle any of the live metal parts is entirely eliminated.

The carrier, when used as a switch for

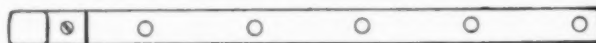
double-break, features possessed by no other type of either switch or panel board. The fuses used are the plain standard link open type, but by being enclosed in these carriers they are endowed with all the advantages of the enclosed type of fuse without the higher cost of the latter.

The mechanical construction embodies simplicity of design and an arrangement of parts which results in an unusually neat appearance. The contacts are liberal in surface, and make perfect fit. All

and allowing connections completed, and the carriers can be affixed when wiring is ready to turn on the current.

## A Modern Printing Press Equipment.

Electrically-driven printing presses have been in operation long enough to demonstrate beyond question their superiority. They are no longer an experiment, but are considered an important factor in economy of power and increased output. The individual equipment of



FLAT CONNECTION STRIPS FOR 5-CIRCUIT PANEL.



FIG. 4-IMPROVED PANEL BOARD.



FIG. 2-IMPROVED PANEL BOARD.

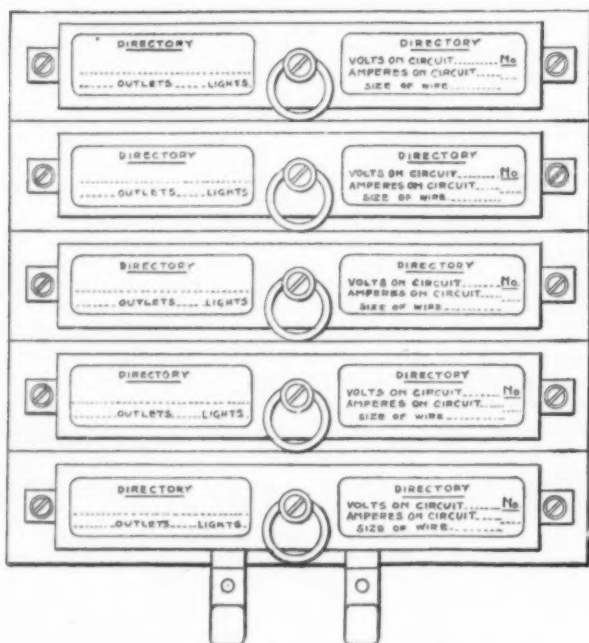


FIG. 3-IMPROVED PANEL BOARD.

by the General Incandescent Arc Light Co., 572-578 First avenue, New York, is a distinct departure from all previous types, and represents the latest develop-

opening or closing branch circuits is, by reason of its mechanical construction, a quick-break switch on both the making and breaking of the circuit, as well as

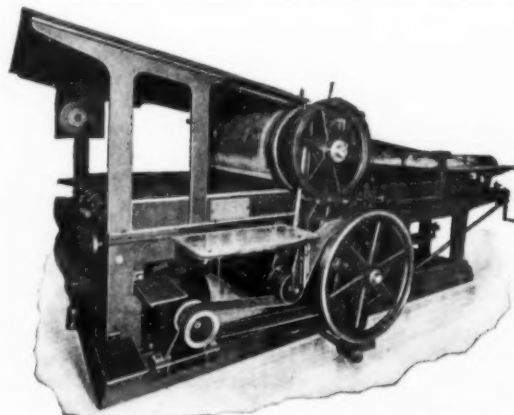
parts are readily accessible, yet free from exposure to injury. As the fuse is ruptured under cover of the carrier, the panel is always free from the marred and unsightly appearance of the ordinary type of panel board. All parts being made by machinery are readily interchangeable, and can be removed from the face of the panel while in position.

As will be seen in the illustration, each fuse carrier is designed to receive a directory card on which can be written, under appropriately printed headings, the

each press is also conceded to be very satisfactory, but it is sometimes a question which method—belted, geared or direct-connected—gives the best results. One of the most successful is a belted equipment recently perfected by the Sprague Electric Co. of 527-531 West Thirty-fourth street, New York, and shown in the accompanying illustration. It consists of a Lundell four-horse-power standard speed compound-wound motor, belted to a flat-bed press.

The motor is controlled by one of the Sprague Company's standard rheostatic rotary controllers, used in connection with armature and shunt field regulating resistances. The pulley on the motor is four and one-half inches diameter and six-inch face, and the pulley on the main driving shaft of the press is twenty-two inches diameter, six-inch face. The transmission of the power from the motor to the press is obtained with a medium thickness perforated endless belt five and one-half inches wide, which insures noiseless operation and reduces slippage to a minimum. An idler or belt tightener is used, which, together with the motor brackets, are furnished and attached by the press manufacturer. This method of equipment has merit, owing to the impossibility of sudden strains being put on the gears of the press or the motor by the rapid manipulation of the controller. With this equipment, if the controller suddenly throws the full power upon the motor it causes a slight slippage of the belt until the press has attained its speed. The motor is attached to a removable bedplate, which permits the motor, in case of accident, to be withdrawn and another substituted while repairs are being made. This equipment has the addi-

number of outlets, lights, location and size of wire, amperes and volts. This information, labeled as it is directly at point of circuit where circuit is controlled, is very much more convenient than the present method of placing directory



MODERN PRINTING-PRESS EQUIPMENT.

frames on the doors of the panel boxes. The carriers are designed for a minimum capacity of ten amperes and 125 volts, and the main feed busbars are figured to carry six amperes per circuit.

The new "G. I." panels can be installed in the cabinets without the fuse carriers

tional advantage of being an economical installation.

## Automatic Wood-Dish Machine.

The illustration herewith represents the No. 1 Patent Automatic Oval Wood-Dish Machine manufactured by the Def-



ance Machine Works of Defiance, Ohio. It is designed especially for cutting wood dishes, or plates, from the face of a block of wood, and its capacity is sufficient to make 75,000 dishes per day of ten hours, cutting about twenty-five to the inch. They are generally made in four sizes, although different sizes can be produced by the use of a special-sized cutter. The

moved horizontally in either direction by rack and pinion motion, which is used for saving time in moving the carriage forward when commencing the cut, or moving the carriage back after the last dish has been cut ready for the next block.

The screw feed is driven by cut gears, and is automatic. After the block has been placed in the chuck or jaw the car-

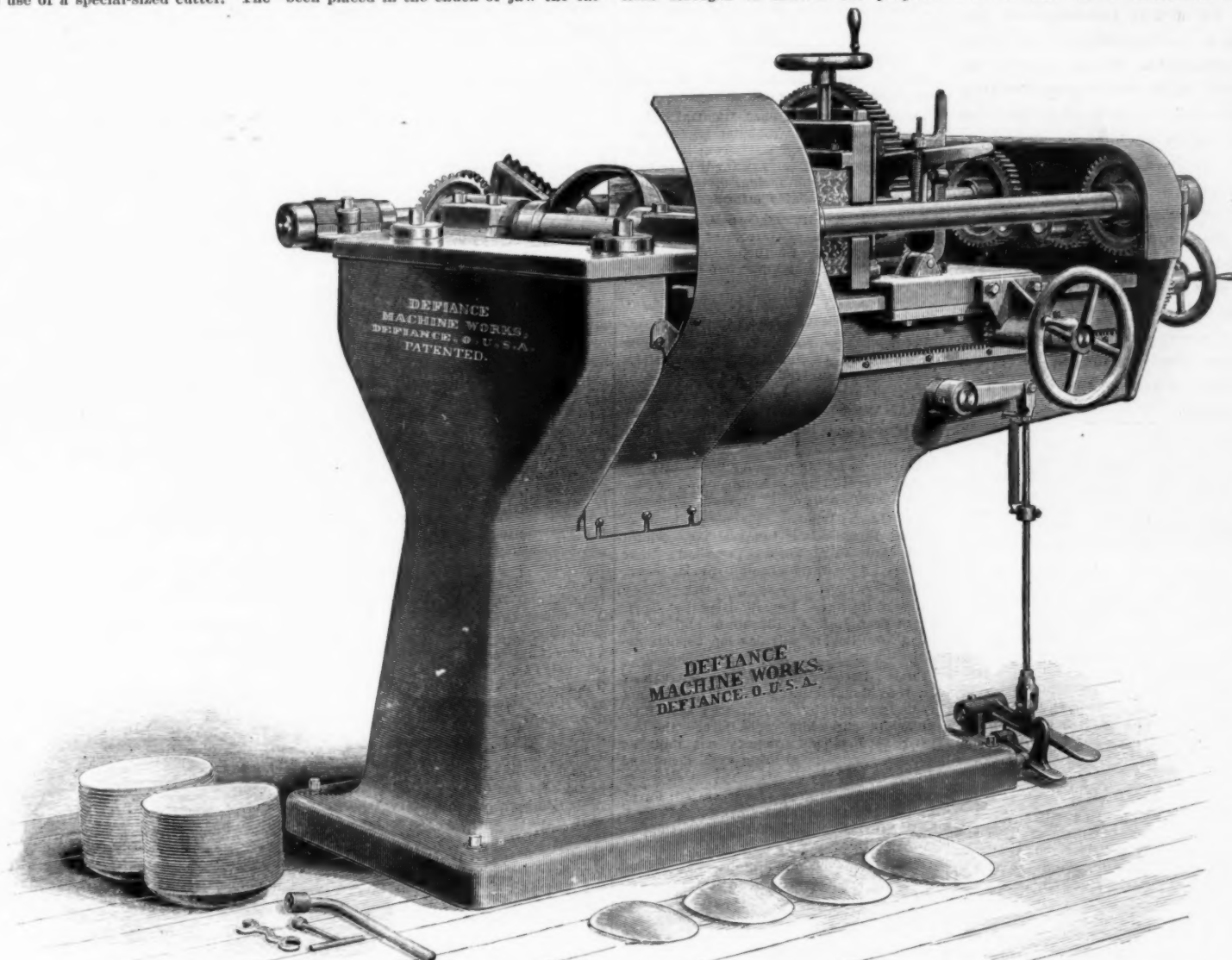
riage is fed forward by hand-wheel to the point where the cutting begins, when the nut is engaged with the screw by a convenient hand-lever. Instantly the block is fed forward, when each revolution of

the next block. The feed can be adjusted to cut dishes of different thickness, and it can be stopped at any point while the machine is in motion by simply lifting the feed pawl.

The material used from which dishes are made is usually maple, but any wood can be used that is odorless and of sufficient strength to answer the purpose.

#### Cottonseed Huller and Separator for Plantation Use.

The accompanying cut is a good likeness of the No. 4 cottonseed huller,



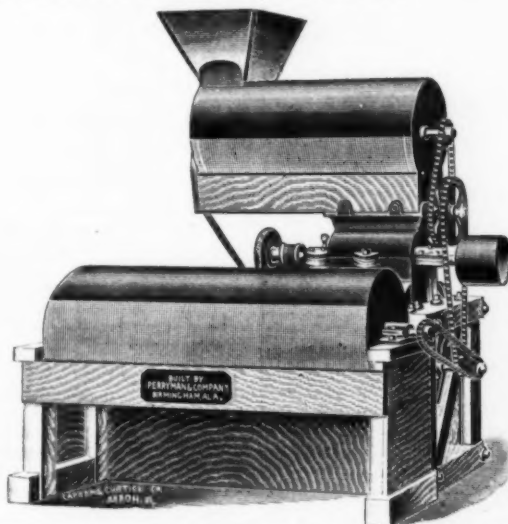
No. 1 PATENT AUTOMATIC OVAL WOOD DISH MACHINE.

oval wood dish is an excellent and inexpensive receptacle for holding butter, lard, cheese, berries, pickles, etc. They are perfectly clean, which, together with the neatness and convenience of the package, has caused them to be generally adopted in America by grocerymen and others dealing in the articles named. This dish can also be used for many other purposes.

This machine is entirely automatic in its movements and exceedingly simple in all its parts. It can be handled successfully by cheap labor. The frame is a massive casting in one piece, with cored center and a broad floor base, with the working parts accurately fitted to it. The knives employed consist of a revolving circular cutter for cutting the dish by a single continuous cut, and two facing knives for shaving off the surface of the block between each cut of the dish knife, for making the dish to uniform size and with straight edges. The carriage which supports the wood block is thoroughly gibbed to the main frame and fitted with a powerful chuck or jaw for gripping and securely holding the block while being operated upon. It is opened and closed by hand-wheel and screw to receive blocks of different sizes. A screw fitted through the frame connects with the carriage to a quick opening and closing nut to engage or disengage the feed. When the nut is opened the carriage can be

riage is fed forward by hand-wheel to the point where the cutting begins, when the nut is engaged with the screw by a convenient hand-lever. Instantly the block is fed forward, when each revolution of

The material is simply sawed into blocks of the desired dimensions to produce the proper-sized dish. They should be boiled in hot water to soften them before going to the machine.



COTTONSEED HULLER AND SEPARATOR FOR PLANTATION USE.

the cutters produces a dish, and so continuing until the block is entirely consumed. When the last dish is cut the nut is automatically opened and the feed arrested, at which time the operator is free to move the carriage back ready for

The friction pulley attached to the rear side of the machine is twelve inches diameter, five-inch face, and it should run 550 turns per minute. It can be belted to direct from the main line shaft. No intermediate countershaft is required ex-

cleaner and separator as manufactured by Perryman & Co., Birmingham, Ala. These machines are designed more particularly for use on the farm in connection with cotton gins. They are built in several sizes of sufficient capacity to take the seed from any ordinary gin plant. The seed does not require delinting, and can be fed directly into the huller from the gins, where it is thoroughly ground and the meats or meal separated from the hulls, the product from a ton of seed being about 1000 pounds of meal and 1000 pounds of hulls. These products are being largely used on the farm for feeding and fertilizing purposes. The meats or kernels are also being bought by the oil mills, and there is a market for export, the ruling price being about double that of the seed per ton.

These machines have been in use for the past five years by progressive farmers and ginners throughout the cotton-growing States, the experience of the users being that the seed, after being run through the machine, is double in value for either feeding or fertilizing purposes. The apparatus is equipped with seed-cleaners, tempered steel knives, quick release springs, and is strictly up to date in every respect, possessing many improvements.

For illustrated catalogue or other information address the manufacturers as above.

# CONSTRUCTION DEPARTMENT.

**THE MANUFACTURERS' RECORD** seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

## ALABAMA.

Anniston—Feed and Grist Mill.—Anniston Grocery Co. has contracted for erection and equipment of its plant lately reported; corn and feed mill will have capacity of 2000 to 3000 bushels daily; elevator will have 25,000 bushels capacity.

Anniston—Iron-furnace Improvements.—Woodstock Iron Co. will rebuild and modernize No. 3 furnace, capacity daily to be 300 tons; No. 4 furnace will also be likewise improved when No. 3 has been completed. New washers are being erected and equipment for an electric-lighting plant has been purchased.

Birmingham—Gas Plant.—Caldwell Bradshaw, E. N. Cullom and associates, reported recently as having obtained gas-plant franchise, are negotiating with United Coke & Gas Co. of Boston, Mass., relative to erection of plant.

Birmingham—Steel Furnaces.—It is stated that the Tennessee Coal, Iron & Railroad Co. will build ten stationary basic-steel furnaces, thus doubling its capacity and making it 2000 tons of steel billets daily. J. B. McCormack is general manager.

Birmingham—Grocery.—McMillan-Lee Company and Simmons, Durham & Co. have combined and incorporated as the Alabama Grocery Co., capital stock \$200,000. S. W. Lee is president, and C. S. Simmons, secretary.

Carrollton—Cotton Mill.—The proposed cotton mill reported last week may be removed from Birmingham. Endeavors are being made to organize a \$50,000 company to secure the removal. John T. Cochrane can give information.

Gadsden—Car Foundry, Machine Shops, etc.—The \$10,000 company recently noted has incorporated as the Gadsden Foundry and Machine Shops, and will at once equip for manufacturing tram cars, scoops, scrapers, etc. Incorporators are W. G. Belenger, C. P. Smith, J. W. Williams, H. B. Murphy, F. W. Belenger and R. B. Kyle.

Greenville—Electric-light Plant.—W. C. Porter of Laurel, Miss., has contract for electric-light plant for this city; about \$13,000 will be the cost.

Guntersville Oil Wells.—Brown's Valley Oil Co. has been organized, with capital stock of \$400,000, to drill for oil. Samuel Henry is president; H. C. Henderson, vice-president, and Thos. D. Mitchell, secretary.

Hartselle—Oil Wells.—Moulton Valley Oil Co., reported last week, is capitalized at \$500,000, and will drill for oil at once; S. B. Trapp, Montgomery, president.\*

Huntsville—Cotton Mill.—It is stated that another cotton mill will be built by company to be capitalized at \$1,000,000. Probably T. W. Pratt can give information.

Marion—Steam Laundry.—J. B. King contemplates establishing steam laundry.\*

Tuscaloosa—Iron Furnace.—Central Iron & Coal Co. does intend to build an iron furnace, as was rumored last week; it will be a 200-ton plant, and surveys for it have been commenced. Joseph Lodge, division superintendent, can probably inform.

Wylam—Rod, Wire and Nail Mill.—It is reported that William Garrett of Cleveland, Ohio, is negotiating for the establishment of a rod and wire and nail mill, and that Northern parties will be interested.

## ARKANSAS.

Bentonville—Incorporated: McAndrew Hardware Co., capital stock \$6000, with Marion Douglas as secretary.

Camden—Paint Company.—Incorporated: Camden Oil & Paint Co., with capital stock of \$100,000, and Richmond Hibbard, president.

Danville—Lumber Company.—Incorporated: W. H. Daman Lumber Co., capital stock \$100,000, and W. P. Daman, president.

De Queen—Lumber Company.—Incorporated: Burg-Forbes Lumber Co., capital \$6000, with W. A. Forbes, president; Clyde Fordyce, vice-president, and A. H. Burg, secretary.

Eureka Springs—Asphalt Deposits.—It is stated that J. A. C. Blackburn and W. F. Rozelle of Rogers will develop asphalt deposits.

Little Rock—Brick Works.—Arkansas Brick & Manufacturing Co.'s plant has not been destroyed by fire, as was stated recently, but three kilns were burned, the loss being small. This company has built an addition for manufacturing sash, doors and blinds, etc.

Marmaduke—Milling.—Incorporated: Farmers' Milling Co., capital stock \$10,000, by J. J. Gassett, J. M. Rosebery, C. C. Cupples and Arte Holt.

Prescott—Telephone System.—C. J. Hirst, W. B. Waller, J. C. Young, G. R. Haynie and others are organizing a company to construct telephone systems.

## FLORIDA.

Jacksonville—Electric-light Plant.—City will appropriate \$27,500 for renewing and extending its electric-light plant destroyed by fire recently. P. A. Holt is acting mayor.

Jacksonville—Paint Factory.—Florida Paint Co.'s new factory building, lately reported, will cost \$25,000, and it will be equipped for manufacturing and dealing in paints, etc.\*

Moffitt—Lumber Manufacturing.—Incorporated: De Sota Lumber & Manufacturing Co., capital stock \$100,000, by E. C. Lassiter, W. J. Scarboro, P. H. Morris and others of Ashboro, N. C.

Tampa—Cigar Factory.—Jose Franquiz, A. Norelga, F. M. Parker, C. M. Knott and Robert McNamee have incorporated Norelga-Franquiz Company, capital \$5000, to manufacture cigars, cheroots, etc.

Watertown—Ice Plant.—East Coast Lumber Co. has let contract for installation of 10-ton ice and cold-storage plant.

## GEORGIA.

Americus—Cotton Mill.—A \$75,000 cotton mill has made a proposition for the removal of its plant to Americus. "The Mayor" can give information.

Atlanta—Mercantile.—Incorporated: Inman-Smith Company, capital stock \$500,000, for mercantile purposes, by Hugh T. Inman, John A. Smith and others.

Augusta—Boiler Works.—George R. Lombard Company has let contract for construction of an addition to boiler works; building will be of steel construction, 110x229 feet, and will cost \$10,000.

Augusta—Alcohol Factory.—North Augusta Electric & Improvement Co. contemplates establishing plant to manufacture alcohol from the residue of old whiskey barrels.

Dublin—Cotton Mill.—Dublin Cotton Mills will issue bonds for \$50,000; probably improvements are intended.

Harmony Grove—Cotton Mill.—Harmony Grove Mills has increased capital stock from \$200,000 to \$300,000 to double its plant, which was reported lately as contracted for.

Jefferson—Knitting Mill.—It is said that stockholders in the Jefferson Cotton Oil Mill Co. will build a knitting mill.

Macon—Flour Mill.—The erection of a flour mill is talked of, and Geo. A. Smith can give information.

McRae—Electric-light and Water Works.—Town will vote on the construction of water-works and erection of electric-light plant. Address "Town Clerk."

Tallapoosa—Gold Mines.—A New York party will develop the R. D. Chandler gold property of 405 acres. C. F. Durr is mining engineer to make preliminary developments.

## KENTUCKY.

Hopkinsville—Coal and Ice Company.—R. E. Cooper, O. L. Bass, T. W. Blakey and others have incorporated Consumers' Ice & Coal Co., with capital stock of \$25,000.

Jackson—Lumber Mills and Timber Developments.—Kentucky Lumber & Veneer Co., capital stock \$150,000, has been organized by Kentucky and Ohio parties, with home office at Cleveland, Ohio. Timber lands have been bought for development and a band mill will be built at once, together with 16-mile 36-inch gauge railroad. H. Wade Beavers, manager at Jackson, can be addressed.\*

Louisville—Telephone Company.—Indiana Long Distance Telephone & Telegraph Co. has been incorporated (at Dover, Del.), with capitalization of \$1,000,000, for constructing telephone and telegraph lines in Kentucky, Indiana and Ohio. Incorporators are John Armstrong, C. J. Doherty, E. M. Coleman and others.

Louisville—Gas and Oil Wells.—Southern Oil & Gas Co. has been organized, with capital stock of \$2,000,000, to drill for oil and gas. C. W. Grimm of Middlesboro is president; J. G. Henry, vice-president; W. F. Nicholson, treasurer, and Chas. W. Metcalfe, secretary.

Louisville—Asphalt Mines, Plant, etc.—The proposed asphalt company recently reported has organized as the Federal Asphalt Co., with capital stock of \$5,000,000, of which amount \$3,500,000 has been paid in. Twenty-three thousand acres of land have been bought in several counties, whereon asphalt rock deposits will be developed. Plans have been prepared for enlarging a preliminary plant to 600 tons capacity, and construction of it has commenced. About \$1,000,000 will be expended for plant and other preparations for marketing product. Coal deposits will be developed for fuel. Completed plant will work 300 men. M. D. Coffeen of Chicago, Ill., has been elected president; Joseph Huffaker of Louisville, vice-president; A. H. Loeb (treasurer Sears-Roebuck Co.) of Chicago, treasurer; F. L. Warner, secretary, and Axel F. Hatch of Chicago, general counsel. Probably it is best for the present to address vice-president.

Paris—Sewerage System.—Contract for constructing the proposed sewerage system has been let to Geo. O. Tenney of Spartanburg, S. C., at about \$20,000.

Somerset—Oil Wells.—Somerset Petroleum Co. has been organized, with capital of \$2000, and A. D. Shotwell, secretary, to drill for oil.

## LOUISIANA.

Donaldsonville—Oil-fuel Plant.—Town council contemplates installing in its powerhouse apparatus for burning oil as fuel. Address "Town Clerk."

Shreveport—Sewers.—City council has decided upon the construction of certain proposed sewers that will cost \$97,000. Address "The Mayor."

## MARYLAND.

Baltimore—Graphite Works.—Otto M. Matfield, Frederick Gross, Albert Smith, J. Laupheimer and Dr. J. Hoskins have incorporated American Graphite Co., and will establish graphite works. New Hampshire deposits will be utilized.

Baltimore—Telephone Factory.—Hughes Telephone Co., reported incorporated recently, will manufacture and install telephones, making a specialty of 'phones for interior use, such as hotels, apartment-houses, etc.; office at 219 East Baltimore street; T. Quincy Scott, secretary.

Baltimore—Belting Factory.—Wm. H. Gough, Wm. S. Langford, Humphrey W. Buckler, Ansel H. Sibley and Wm. K. Boone have incorporated Mt. Vernon Belting Co.,

with capital stock of \$50,000, to manufacture belting, hose and cotton materials.

Baltimore—Drug Factory.—Incorporated: Caffeno Drug Co., capital stock \$100,000, to manufacture drugs and chemicals, by Edw. M. Parrish, Chas. H. Parrish, Edw. P. Murray, John Waters and Walter M. Causey.

Baltimore—Cigar Factory.—Theobald & Oppenheimer of Philadelphia, Pa., contemplates establishing cigar factory.

Baltimore—Type Foundry.—Southern Type Foundry Co. has been incorporated to acquire and extend the Preston Fiddis Company's type foundry at 31 South Calvert street.

Baltimore—Water-works Improvements.—Alfred M. Quick, water engineer, has prepared plans for proposed improvements, including \$31,000 worth of extensions to mains on Edmondson avenue, erection of \$16,000 storehouse, and purchase of seven Ventury meters for \$9000. The engineer also referred to necessity for erecting a \$55,000 standpipe on Roland avenue.

Baltimore—Hornly Mill.—Standard Milling Co. has been incorporated, with capital stock of \$10,000, by Wm. T. Bromwell, Jas. H. Giese, John T. Bromwell, Jos. S. Taylor and James L. Read, for manufacturing hornly, etc.

Cambridge—Saw-mill.—James A. Carmine will rebuild his burned saw-mill.\*

Hyattsville—Broom Factory.—A \$2000 company will be organized to establish broom factory. Board of Trade can inform.

Rising Sun—Feldspar Quarry.—Charles Williams (not Williams, as given lately) of 19 East Fayette street, Baltimore, has purchased and will develop feldspar quarry.

Rowlandsville—Machine Shops.—Wm. T. West & Co. will establish machine shops and tank works; they will utilize the old rolling-mill plant.

Sparrow's Point—Steam Laundry.—Enterprise Laundry Co. has been organized, with capital stock of \$35,000, by Mrs. Mary F. Geiger, Louisa H. Eldred, F. C. Eldred, F. R. Wood and Victor C. Armstrong.

Sparrow's Point—Bakery.—Maryland Steel Co. will establish a bakery; Owens & Sisco are preparing plans for 91x94-foot building, two stories, slag and slate roof, three ovens, etc.

Washington, D. C.—Bottle Company.—Jerome Bottling Co. has been incorporated, with capital stock of \$10,000, to deal in bottles, etc., by Herman Franz and H. T. Jerome of Baltimore, Md.; Albert Hassall of Bowie, Md., and Ben. Wollberg of Alexandria. W. H. T. Jerome of Baltimore is manager.

## MISSISSIPPI.

Batesville—Woodworking Factory.—Incorporated: Batesville Manufacturing Co., capital stock \$10,000, by J. C. Price, C. R. Vance, M. E. Jarrett, L. L. Pearson and others for the manufacture of spokes, rims, etc.

Braxton—Planing Mills.—Incorporated: Braxton Planing & Manufacturing Co., capital stock \$10,000, by J. R. Bush, J. M. Rogers, J. A. Barwick, S. B. Waddell and others.

Greenville—Cotton, etc.—Crouch-Melsner Company, capital stock \$10,000, has been incorporated to deal in cotton, etc., by John H. Crouch and Wm. B. Melsner.

Greenville—Ice Plant.—Greenville Ice & Coal Co. has let contract for a 50-ton machine, which will double ice plant.

Greenville—Knitting Mill.—It is proposed to organize a \$25,000 company to establish knitting mill and cotton-rope factory. H. T. Crosby can give information.

Greenville—Sewerage System.—City will vote September 16 on issuing \$50,000 in bonds for construction of sewerage system; J. W. Lee, city clerk.

Greenwood—Electric-light, Water-works and Sewerage.—C. E. Wright and associates have obtained 25-year franchise for water-works, electric-light plant and sewerage system.

Hazlehurst—Electric-light and Water Works.—Wm. C. Porter of Laurel will prepare plans and specifications for this city's proposed water-works and electric-light plant. About \$35,000 will be available.

Jackson—Mercantile.—C. J. Washington, J. P. Alban and others have applied for incorporation of Southern Dental & Surgical Co., capital stock \$12,500.

Ocean Springs—Water-works.—The water company lately reported has incorporated as People's Water-Works Co., capital stock



\$10,000, and will establish system, obtaining supply from artesian wells; incorporators, Jos. Kotzum, F. J. Lundy, E. W. Illing, O. L. Bailey and others.

Terry—Electric-light and Water Works.—City has ordered an election held October 7 to vote on issuing bonds for electric-light and water works. Address: "Town Clerk."

Tunica—Electric Plant.—Incorporated: Tunica Electric Light & Power Co., capital \$2500, has been incorporated by Leo Lesser, J. T. Watson, A. I. Dorsey, J. W. Brown and others, for manufacturing electricity for light and power.

#### MISSOURI.

Clinton—Telephone Company.—Incorporated: Mutual United Telephone Co., with capital stock of \$15,000, by G. R. Lingle, S. T. Neill, W. F. Hall and others.

Kansas City—Lumber Company.—Incorporated: T. H. Rogers Lumber Co., capital stock \$50,000, by T. H. Rogers of Carthage, Cyrus B. Sweet and W. L. Stocking of Kansas City.

Kansas City—Water-works.—Armour Packing Co. contemplates constructing a system of water-works for its extensive packing plants, etc.

Springfield—Asphalt and Oil Development.—A \$50,000 stock company is being organized to develop for oil and asphalt in Bartow county.

St. Joseph—Electric-light Plant.—City will enlarge capacity of its plant to accommodate fifty additional street lights. W. C. Stewart is city electrician.

St. Louis—Box Factory.—Loy-Lange Box & Lumber Co. has purchased site at \$14,000 for erection of box factory.

St. Louis—Steam-trap Company.—Incorporated: Allen Steam Trap & Separator Co., capital stock \$100,000, by H. T. Smith, Dod G. Gibson, P. W. Dent and others.

St. Louis—Hat Company.—Incorporated: Rothschild Bros. Hat Co., with capital stock of \$250,000, by Albert Rothschild and others.

#### NORTH CAROLINA.

Durham—Heating Plant.—Trinity College's proposed heating plant, reported last week, will cost from \$15,000 to \$20,000 (not \$20,000 to \$30,000, as was stated). W. P. Few is president.

Ellenboro—Monazite Mines.—Karl Kethel of Germany, reported recently as having purchased 353 acres of land near Ellenboro, on which monazite mines will be opened, acts for himself and German parties (not for New York parties, as was stated). The monazite sand will be mined and shipped to Hamburg for concentrating and preparing.

Elliot—Cotton Mill.—Marion Butler (office in Tucker Building, Raleigh) writes that he does contemplate erecting the cotton mill lately reported, but no definite plans have been made yet.

Gold Hill—Distillery.—W. H. Martin will build a distillery for corn whiskey.

Greensboro—Trunk Factory.—Bell Furniture Co. contemplates manufacturing trunks, but will not need machinery.

High Point—Furniture Brokers.—S. H. Tomlinson & Co. have reorganized into the Tomlinson Furniture Co., with \$25,000 capital.

High Point—Excelsior and Trunk Factory.—The company reported organized recently has taken name of High Point Trunk & Excelsior Co., and will establish factory as soon as site is chosen. Has incorporated with capital stock of \$40,000, of which \$12,500 is paid in. E. L. Ragan is secretary.

Kinston—Mantel Factory.—Kinston Mantel Co. will increase capital by \$5000 and enlarge factory.

Mooreville—Electric-light and Water Works.—The construction of water-works and electric-light plant is talked of. Probably "Town Clerk" can inform.

Murphy—Alfred S. Emerson and John H. Dillard of Murphy and T. M. Brady of Canton, Ga., have incorporated National Marble Co., with capital stock of \$500,000, to develop marble quarries, etc.

Thomasville—Chair Company.—Chartered: Standard Chair Co., capital stock \$25,000, by F. S. Lambeth, E. W. Cates and J. W. Lambeth, to deal in furniture, etc.

Thomasville—Furniture-machinery Works.—L. G. McKnight & Co. of Gardner, Mass., will establish furniture-machinery factory at Thomasville, as reported recently. Machinery has been ordered. E. J. McKnight will be manager.

Washington—Machine Shop.—It is rumored that a foundry and machine shop will be built. Possibly Chas. Daughy can give information.

#### SOUTH CAROLINA.

Abbeville—Furniture Factory.—A stock company is being organized to build furni-

ture factory; \$10,000 have been subscribed. C. P. Hammond can give information.

Charleston—Biscuit Factory.—It is reported the National Biscuit Co. (offices in Chicago) will build a factory. W. T. Laverty is local manager.

Greenville—Signal Factory.—B. S. A. Harris and W. A. Harris have incorporated Harris Universal Signal Co., with capital stock of \$150,000, to manufacture a train signal device.

Trio—Brick, Cement and Lime Works.—Leonard C. Register intends to establish works for producing bricks, lime and cement.

Union—Lumber Manufacturing.—T. E. Bailey and R. L. McNally have incorporated Bailey Lumber & Manufacturing Co., with capital of \$10,000, for lumber manufacturing.

#### TENNESSEE.

Bedford County—Oil Lands.—Southern Tennessee Oil Co. has organized, with Chas. H. Shaw of Cincinnati, Ohio, president, and H. A. Shifflet of Knoxville, secretary. Company has bought and will develop for oil 20,000 acres of land in Bedford and Rutherford counties; capital stock is \$150,000.

Chattanooga—Stogie Factory.—F. W. Fischer of Wheeling, W. Va., will establish a stogie factory.

Clarksville—Tobacco Factory.—J. H. Long & Co. will establish tobacco factory.

Decatur—Telephone Extensions.—Meigs County Telephone Co. will extend its lines, about ninety miles of wire having been bought for the purpose.

Dickson—Electric-lighting and Water Supply.—Town will vote September 24 on issuing bonds for \$3500 to secure electric lights and water supply.

Dresden—Furniture Factory, etc.—It is reported that a wagon factory, harness factory, furniture factory and chair factory will be located. Board of Trade can inform.

Jefferson City—Corn Mill.—Smith, Huggins & Co.'s corn mill, reported last week, will have daily capacity of 700 bushels; machinery all purchased.

Marion—Cotton Gin.—Hicks & Schultz will rebuild their cotton gin, recently reported as burned.

Memphis—Gin and Machine Company.—Incorporated: Frank Ellis Gin & Machine Co., capital stock \$40,000, by Frank Ellis, Thos. J. Fox, S. B. Holt, T. D. Jackson and Rhea P. Cary.

Montgomery—Iron Mining and Manufacturing.—Incorporated: Red River Furnace Co., with capital stock of \$200,000, by Michael Savage, H. N. Leech, B. L. Rice, Samuel Ford and others, to mine and manufacture iron, etc.

Nashville—Fertilizer Factory.—The Tennessee Phosphate Co. (merged with the Globe Phosphate Co. of Louisville, Ky., and the Jarecki Company of Sandusky, Ohio) is reported as to build an extensive factory in Nashville to employ 300 to 500 hands.

Nashville—Lumber Company.—C. H. Hill, C. H. Hill, Jr., John Craig, W. A. Owen and others have incorporated Charlie Hill Lumber Co., with capital stock of \$7000.

Nashville—Chemical Company.—C. F. Shappe, W. L. Horn, A. S. Williams, J. L. Whitworth and E. T. Brown have incorporated Brown Chemical Co., with capital stock of \$25,000.

Nashville—Furniture Company.—Shappe & Mills Furniture Co., with capital stock of \$20,000, by Percy Shappe, A. C. Scuddy, John Hopkins, L. S. Mills and P. M. Estes.

Nashville—Oil, etc., Company.—Chartered: West Nashville Oil, Gas & Water Co., capitalized at \$25,000, by C. Fisher, W. F. Brooks, W. W. Bush and others.

Tallahoma—Electric-light and Water Works.—City has accepted plans by Granbery Jackson of Nashville for its proposed water-works and electric-light plant reported recently; \$35,000 is the appropriation; Gordon Hicks, chairman of committee in charge; bids have been invited.

Wartrace—Oil Wells.—Bedford County Oil & Mining Co. has been organized, with capital of \$3000, to bore for oil, by John W. Thomas, M. D. De Bow, Geo. R. Knox and others.

#### TEXAS.

Beaumont—Oil Wells.—Huntley Oil & Refining Co. has purchased land on Spindle Top and will drill for oil.

Beaumont—Oil-pipe Lines.—Merchants & Mechanics' Oil Co. will build a 500,000-gallon oil tank and construct pipe lines to transport product. S. H. Spangler is president.

Beaumont—Oil Wells, Pipe Lines and Steamer Lines.—James Hogg of Fort Worth and James W. Swayne of Beaumont have gone to Europe to organize a company with

capital stock of \$25,000,000 to operate in the Beaumont oil fields. They propose establishing a line of 100 oil steamers and build an eight-inch pipe line at a cost of \$1,500,000 with a capacity of 5,000,000 barrels. The oil is to be piped to Gulf ports for transportation to all parts of Europe and South America. It is expected to have the company in operation by January 1.

Calvert—Telephone System.—E. D. Atkinson is organizing company to establish telephone system between Calvert and Mayfield.

Clarksville—Water Supply.—Board of Trade is arranging to utilize a deep well for fire protection.

Dallas—Ginners' Machinery Works.—Ginners' Machinery Co., lately reported incorporated, will build ginning machinery. Foundry and sheet-iron shop have been completed, and a woodworking and machine shop will be built.

D'Hanis—Oil Wells.—Pittsburg & Sunset Oil Co. of Pittsburg, Pa., will drill for oil near D'Hanis.

El Paso—Brewery.—W. C. Miller is in correspondence with a California party who contemplates building brewery.

El Paso—Brewery.—A company is arranging to build a brewery. Probably A. Courchesne can give information.

El Paso—Shoe Factory.—W. N. Small is said to be interested in the proposition of a Boston (Mass.) company to establish shoe factory in El Paso.

Gainesville—Cotton Mill.—It is reported that W. S. Dennie of Richmond, Va., proposes locating a \$75,000 cotton mill in Gainesville.

Georgetown—Bottling and Ice Plant.—C. S. Belford, Lee M. Taylor, J. E. Cooper, F. W. Carothers and A. W. Sillure have incorporated City Ice and Bottling Works, with capital stock of \$15,000.

Georgetown—Mining.—Incorporated: El Fuerte Mining Co., capital \$2500, by Edw. J. Olive, W. T. Jones and C. S. Belford.

Henrietta—Oil Wells.—E. C. Noble and associates, lately reported as drilling for oil, have formed company. W. B. Worsham, J. W. Lockridge and F. B. Wyatt are interested.

Keller—Gold Deposits.—It is reported that J. S. Young of Weatherford has discovered and will develop gold deposits near Keller.

La Grange—Grist Mill and Gin.—Gerhard Diers will erect grist mill; also cotton gin next season.

Oakville—Oil Mill.—Dr. Simmons has let contract for the erection of a cottonseed-oil mill.

Orange—Brick Company.—N. G. Dawson, Theo. Low, M. Dawson, U. R. Smith and John J. Ball have incorporated Orange Brick Co., with capital of \$10,000.

Palestine—Packing Plant.—Palestine Packing Co. will rebuild its plant that was burned recently; contract has been let for 30-ton refrigerating machine.

Palo Pinto—Gas-pipe Lines.—Col. C. Slaughter of Dallas and associates are perfecting arrangements to pipe natural gas to several cities.

Sabinal—Oil Wells.—Chartered: Pittsburg & Sunset Oil Co., capital stock \$40,000, to develop for oil, by A. M. Brown, Thos. Lewis and J. H. Merling of Pittsburg, Pa.; A. J. Durham and others of Sabinal.

San Antonio—Sand Mine.—Incorporated: Lorraine Sand Co., capital stock \$10,000, to mine sand, by R. G. Scott, E. G. Trueheart, E. O. Mensebach and Marshall Hicks.

Schulenberg—Water-works.—The issuance of bonds for water-works is talked of. "The Mayor" can give information.

Sherman—Townsite Company.—Incorporated: Grayson Townsite Co., capital stock \$50,000, by T. Lahadle, Jot Gunter and Sam Lazarus.

Sidney—Copper Deposits.—It is rumored that copper deposits have been found on L. T. Arnold's land.

#### VIRGINIA.

Bedford City—Paint Factory.—Detroit (Mich.) parties have subscribed \$60,000 for the organization of a company to develop paint-ore clays and erect a factory for manufacturing paints. Plans, etc., for a \$25,000 building have been completed. The company will elect officers this week. Judge Robert Frazier of Detroit, Walter Ruau of Bedford City and others are interested.

Big Stone Gap—Iron Furnace.—Cranberry (N. C.) Iron & Coal Co. has purchased Carnegie iron furnaces.

Craigsville—Cement Works.—Virginia Portland Cement Co. will double the capacity of its 600-barrel cement works; additions to buildings will be erected, also to boiler and stockhouse, and new machinery will be added.

Fortress Monroe—Sea Wall.—Chas. W. Johnson of Lewes, Del., is lowest bidder at \$50,810 for construction of proposed sea wall.

Luray—Gas Plant.—Luray Gas Co. has obtained franchise for city lighting, and probably will greatly enlarge its acetylene-gas plant.

Norfolk—Shipbuilding Plant.—It is reported that the J. R. Trigg Company of Richmond, Wm. Cramp & Sons Ship & Engine Building Co. of Philadelphia, Pa., and Arthur Sewall & Co. of Bath, Maine, are interested in a company now organizing to build a plant for the construction of sailing and steam vessels. Thirty acres of water-front property have been purchased, and options are held on 150 acres additional, intended as site for the plant. J. S. C. Groner of Norfolk, who is promoting the enterprise, is credited with having stated that \$800,000 has been invested in the preliminaries, and that \$200,000 will be expended to complete them. The Cramp Company writes the Manufacturers' Record that it has "no knowledge whatever of the affair, and not the slightest intention of embarking in any such enterprise." Sewall & Co. write: "There is no foundation for the report connecting our name with the proposed plant." The Trigg Company's superintendent is reported to have denied any knowledge of the enterprise.

Norfolk—Peanut-cleaner Factory.—O. A. Sledge has invented and proposes manufacturing a peanut-cleaner for farmers' use.

Norfolk—Shipbuilding Plant.—C. W. Tebault of the Security Real Estate Co., 719 Citizens' Bank Building, and associates are about to apply for the incorporation of the Norfolk Shipbuilding & Dry-Dock Co., with capital stock of \$2,000,000 and bonded in \$1,000,000, for the purpose of building a shipbuilding plant on water-front property near Norfolk. Five hundred acres have been secured as site. Names of the other interested parties will be announced soon.

Norfolk—Mining Company.—Chartered: Chatham Mining Co., capital stock \$6000, with Cornelius De Witt, president; O. D. Jackson, vice-president, and H. Q. Donnan, secretary.

Norfolk—Ferry Company.—Franchises and property of the Elizabeth River & Hampton Roads Ferry Co. have been sold to a new company capitalized at \$150,000, and additional boats will be bought at \$40,000 each. H. L. Page is president, and J. A. C. Groner, manager.

Petersburg—Planing Mill.—Jacob Savage will build a planing mill.

Petersburg—Tobacco Factory.—Continental Tobacco Co. (offices in New York) will build a new factory.

Portsmouth—Mattress Factory.—N. E. Whitehurst, Jr., 100 Crawford street, expects to establish mattress factory, but not at Portsmouth.

Richmond—Sulphur Mines, etc.—Chartered: South Anne Sulphur Mining Co., capital stock \$10,000, with S. L. Kelley, president; Beverly T. Crump, secretary, and Edw. G. Schmidt, treasurer.

Staunton—Cannery.—Cox Bros. & Co. of Bridgeton, N. J., will establish cannery.

White Rock—Iron Furnace.—Lobdell Car Wheel Co. of Wilmington, Del., has blown in its furnace at White Rock.

#### WEST VIRGINIA.

Charles Town—Office Supplies.—Chartered: West Virginia Office Agency, capital stock \$5000, by Thos. R. Moore, S. C. Young, C. D. Ebey and others.

Elkins—Flouring Mill.—Elkins Milling Co. contemplates building 60-barrel flour mill.

McDowell—Coke Ovens.—Elk Ridge Coal & Coke Co. is preparing to build fifty coke ovens.

Morgantown—Electric-light Plant.—I. C. White and associates, reported last week as having bought Morgantown Electric Light & Power Co.'s plant, are stated to have paid \$15,000 and as to expend \$75,000 to \$100,000 to modernize the plant.

Moundsville—Enameling Plant.—An enameling and stamping plant to occupy five-acre site and employ 150 men will be located. Board of Trade can give information.

New Martinsville—Electric-light Plant.—Mountain State Electrical Co. has obtained lighting franchise, and will erect electric plant.

Piedmont—Grocery.—Piedmont Grocery Co. has organized, with capital stock of \$100,000, T. B. Davis of Keyser being president; T. C. Dye of New Creek, vice-president, and N. J. Crooks of Keyser, manager.

Wheeling—Ice Company.—Crystal Ice Co., capital stock \$25,000, has been incorporated by E. L. Caldwell, Wm. Phillips, N. Atwood Hanning, J. C. McKinley and A. J. Frick, acquired A. M. Hamilton's ice business and will continue same.

## BURNED.

Bremen, Ga.—C. W. Daniel's saw-mill; loss \$300.  
 Cambridge, Md.—James Carmine's saw-mill.  
 Jacksonville, Fla.—Henry Clark's saw-mill; loss \$75,000.  
 Jefferson, Texas.—J. M. Deware's soda-water factory and ice plant; loss \$7000.  
 Plano, Texas.—J. T. Murphy's cotton gin; loss \$4000.  
 Rich Hill, Mo.—S. C. Le Mar's flouring mills; loss \$50,000.  
 Sulphur Springs, Texas.—D. A. Connelly's cotton gin; loss \$7000.

## BUILDING NOTES.

Accident, Md.—Church.—The proposed church building is contemplated to cost \$5000. Rev. Geo. Bievernick can be addressed.  
 Asheville, N. C.—Association Building.—The proposed Y. M. C. A. building is to cost \$30,000; it will be 60x125 feet, brick, stone, hardwood and North Carolina pine. O. B. Van Horn is secretary.  
 Asheville, N. C.—Church.—J. M. Westall's contract to build the Central Methodist church, mentioned last week, will amount to about \$60,000; contract covers all except glass, hardware, plumbing, heating, seating, lighting and frescoing.  
 Baillinger, Texas.—Opera-house.—Chartered; Baillinger Opera-House Co., capital stock \$8000, by J. W. Powell, G. F. Schroeter, G. M. Vaughn and W. A. Harman.  
 Baltimore, Md.—Hospital.—Johns Hopkins Hospital has let contract to Wm. Ferguson & Bro. at \$7000 for erection of addition.  
 Baltimore, Md.—Herman Fisher has permit to erect two three-story brick buildings at a cost of \$10,000.  
 Baltimore, Md.—Bank Building.—National Bank of Commerce has let contract to J. J. Walsh & Sons for erection of \$100,000 building; plans by Baldwin & Pennington.  
 Beaumont, Texas.—Store.—B. Deutser has let contract for addition to store building, including electric elevators and modern equipments.  
 Berkley, Va.—School.—John W. Jones of South Norfolk has contract at \$27,270 to build proposed school building.  
 Birmingham, Ala.—Office Building.—Stone Bros. of New Orleans and William C. Weston of Birmingham will be architects for the proposed 10-story fireproof office building reported lately. W. H. Woodward of Weld, Maine, will be the owner.  
 Charles Town, W. Va.—Hotel.—M. Palmbaum and brother have purchased for \$7750, and will enlarge Watson House.  
 Chattanooga, Tenn.—Dwellings.—C. C. Shelton has given contract to John Heibek for construction of four brick dwellings to cost \$12,000.  
 Chattanooga, Tenn.—Residences.—C. C. Shelton has awarded contract for erection of four residences to cost \$10,000. J. R. Sharp let contract to J. B. McAllister for erection of \$3000 frame dwelling. E. B. Wise let contract for erection of \$5000 residence.  
 Collins, Miss.—School.—L. J. McDaniel is prepared to let subcontracts on erection of wood school building.  
 Collins, Miss.—School.—L. J. McDaniel has contract at \$2300 to build school.  
 Dallas, Texas.—Building.—Texas Building Co. has been incorporated by W. F. Fell and others, with capital of \$10,000.  
 Danville, Va.—Warehouse.—American Tobacco Co. (general offices, New York) will build warehouse 165x190 feet, three stories, of brick; capacity to be 10,000 hogheads of tobacco.  
 Davy, W. Va.—Hotel.—D. E. Cline is erecting a hotel.  
 Denison, Texas.—Hotel.—Missouri, Kansas & Texas Railway will buy a \$40,000 building and expend \$75,000 in converting it into a hotel. A. A. Allen is general manager.  
 Denton, Md.—Printing Plant.—Melvin Steel & Johnson have let contract to Insley & Redden for erection of two-story brick building to accommodate printing plant.  
 Dresden, Tenn.—School.—It is said an \$8000 school building will be erected. Board of Trade can inform.  
 Fayetteville, W. Va.—Jail.—Pauley Jail Building & Manufacturing Co. of St. Louis, Mo., has contract at about \$40,000 to erect jail and sheriff's residence.  
 Galveston, Texas.—Church.—Central Methodist Church has let contract to Thomas McHenry at \$17,500 for erection of edifice.  
 Goldsboro, N. C.—Store.—W. T. Yelverton will erect brick store building.

Havre de Grace, Md.—Church.—Methodist Episcopal Church will erect edifice to cost about \$35,000, with furnishings to cost \$8000. Rev. Dr. Edwards, pastor, can be addressed.  
 Hearne, Texas.—Depot.—Plans have been completed for Houston & Texas Central's proposed depot. G. A. Quinlan at Houston is general manager.  
 Huntsville, Ala.—Hotel.—It is reported a \$50,000 hotel will be erected.  
 Huntsville, Ala.—Stores.—Wm. & Henry Struve will build block of stores, three stories, of brick.  
 Jacksonville, Fla.—Theater.—The theater reported last week will be a temporary structure for this season; next spring a permanent theater will be built. Jas. D. Burbridge can give information.  
 Jacksonville, Fla.—Municipal Buildings.—City council is commencing to consider details as to expenditure of \$400,000 of bonds recently voted for municipal structures, etc.; \$20,000 will be expended for fire department building, \$10,000 for market-house, \$62,500 for city hall, \$25,000 for police headquarters, etc.; P. A. Holt, acting mayor.  
 Jennings, La.—Bank Building.—First National Bank will erect office building.  
 Laurinburg, N. C.—Hotel.—H. E. Bonitz of Wilmington is preparing plans for three-story brick hotel and three-story furniture store for M. A. McDougald.  
 Laurinburg, N. C.—Store.—H. E. Bonitz of Wilmington has prepared plans for three-story brick store and office building for R. E. Lee.  
 Louisville, Ky.—Warehouse, etc.—Wm. L. Silbert, United States engineer, will open bids September 30 for construction of warehouse and power-house; information on application.  
 Lynnville, Tenn.—Business House.—W. C. Smith and E. G. Hickman will erect two-story brick business house.  
 Morristown, Tenn.—Mercantile Building.—W. C. Hale's business structure, reported last week, will cost about \$7000; three-story brick, 36x50 feet. Mr. Hale will superintend the construction.  
 Mountain Lake Park, Md.—Hotels.—Mountain Lake Hotel will be enlarged. Hotel Chautauqua will erect 24-room addition. Loch Lynn Hotel will erect 40-room addition.  
 Nashville, Tenn.—Fire Hall.—City has accepted plans by B. J. Hodge for the proposed fire-department building to cost from \$10,000 to \$15,000.  
 Navasota, Texas.—City Hall.—City will vote November 5 on issuing \$15,000 bonds for erection of city hall. Address "The Mayor."  
 Newport News, Va.—School.—Thos. C. Kennedy of Baltimore, Md., has completed plans for \$30,000 schoolhouse 50x35 feet, of brick. Henry S. Rippel of Baltimore is estimating the work.  
 Norfolk, Va.—Warehouse.—C. A. Woodward & Co. are interested in the proposed storage warehouse reported last week.  
 Norfolk, Va.—Hotel.—Incorporated: New Atlantic Hotel Co., capital stock \$100,000, to conduct hotel now established; C. M. Randolph is president and treasurer.  
 North Augusta, S. C.—Hotel.—James U. Jackson of Augusta, Ga., has completed financial arrangements that will ensure erection of a 250-room hotel to cost \$300,000.  
 Raleigh, N. C.—Office Building.—Carolina Trust Co. has given contract to Stevenson & Gatax of Knoxville, Tenn., for construction of four-story office building to cost about \$25,000.  
 Roland Park, Md.—Residence.—A. C. Meyer of Baltimore has let contract to C. E. Thomas of Towson for erection of \$18,000 frame cottage.  
 Rome, Ga.—Church.—First Christian Church has let contract to Patton Lumber Co. for erection of edifice.  
 Smithfield, N. C.—Stable.—W. M. Saunders will build a stable.  
 Spartanburg, S. C.—College.—Limestone College will erect \$12,000 addition.  
 Tuscaloosa, Ala.—Cottages.—Roseman Hosiery Mills will build forty cottages.  
 Waverly, Va.—Bank Building.—Bank of Waverly has let contract to John Drever of Richmond for erection of \$3500 building.  
 Williamsburg, Ky.—Hotel.—Dr. E. S. Moss has built hotel of forty rooms.

## RAILROAD CONSTRUCTION.

## Railways.

Abilene, Texas.—It is announced that contracts have been let for twenty-five miles of the Colorado, Texas & Mexican Railroad from Abilene north. The road is proposed between Llano and Haskell, Texas, an esti-

mated distance of 216 miles. Morris R. Locke at Abilene is general manager.

Augusta, Ga.—It is reported that the Atlantic & Gulf Shortline Railroad Co. has made arrangements to build to St. Andrew's Bay, Fla., and will issue bonds to finance the enterprise. The entire length of the road is estimated at 335 miles, and a portion of it is now in operation. W. O. Taft is president of the company.

Belair, Md.—D. E. Cutler has been appointed engineer for the Belair & Havre de Grace Electric Railway, and is to make surveys immediately. John H. Reckord is president of the company.

Bismarck, Mo.—The Southern Missouri Railroad is to be built between Bismarck and Missouri Junction, Ill., a total distance of forty-nine miles. Grading is in progress between Ozark and Missouri Junction, a distance of twenty-six miles. A contract has been let to McArthur Bros. Co. of Chicago. C. H. Bosworth is president, and Robert Moore of St. Louis, chief engineer.

Chester, S. C.—William A. Barber, president of the Carolina & Northwestern Railroad Co., writes the Manufacturers' Record that contracts have been let for twelve miles near Lincoln, N. C., and that the Carolina & Northwestern is now being changed from narrow to standard gauge. It will be laid with 60-pound rails. Extensions further north are under consideration, but no decision has been reached. Mr. Barber's address is 35 Nassau street, New York.

Chestertown, Md.—The promoters of the electric railroad between Chestertown, Tolchester and Rock Hall, Md., have been granted an extension of six months' time to begin the construction of this road. It is understood that the Westinghouse Construction Co. of Pittsburg will do the work.

Cleburne, Texas.—John L. Cleveland, one of the promoters of the railroad between Cleburne and the International & Great Northern system, informs the Manufacturers' Record that preliminary surveys are being made, and that the railroad company has become interested in the project.

Denison, Texas.—Tracklaying on the Denison, Bonham & New Orleans Railroad is now in progress between Denison and Bonham, twenty-eight miles, and a connection is to be made immediately with the Missouri, Kansas & Texas system at Bonham Junction. George A. Jarvis at Denison is engineer.

Fort Smith, Ark.—It is reported that the necessary rails for thirty miles of the Fort Smith & Western Railroad have been purchased, and grading is now in progress. The line is to be built between Fort Smith and Guthrie, Okla., a distance of 175 miles. Geo. Hayden at Ishpeming, Mich., is president of the company.

Grafton, W. Va.—It is reported that arrangements are being made to begin construction work immediately upon the electric railway being promoted by the Tygart's Valley Traction Co. Messrs. Wilkins & Ewing of Fairmont, W. Va., are engineers. The estimated length of line is six miles, and surveys have been completed.

Jacksboro, Texas.—It is reported that arrangements are being made to construct a railroad between Jacksboro and Nocona, Texas, an estimated distance of forty-five miles, and St. Louis capitalists have become interested in the plan.

Jackson, Ky.—A correspondent of the Manufacturers' Record writes that the Kentucky Lumber & Veneer Co. will construct a narrow-gauge railroad about sixteen miles long to reach timber lands it owns near Jackson, and will require railroad equipment. H. Wade Beavers is general manager. The company includes capitalists from Cleveland, Ohio.

Laurel Hill, Fla.—The Yellow River Railroad, which is to be extended between Laurel Hill and Wingo, Ala., a distance of fifteen miles, is now in operation between Crestview, Fla., and Florala, Ala. W. B. Wright at Pensacola, Fla., is vice-president of the promoting company.

Morgantown, W. Va.—A company which has purchased the plant of the Morgantown Light & Power Co., it is reported, will construct an electric railroad from Morgantown to the Cheat river. Among those interested are R. C. White and W. E. Glascock.

Newport, Tenn.—The Tennessee & North Carolina Railroad, under construction in Eastern Tennessee, has been completed a distance of fifteen miles, and it is understood will be extended seven miles further as soon as possible. W. C. Fawcett at Newport is engineer of the company.

Owingsville, Ky.—The plan to build a railroad between Owingsville and Preston has reached a point where surveys are to be made immediately. The estimated distance

is five miles. B. Armitage has been selected as engineer.

Prestonsburg, Ky.—Improvements are now in progress upon the Big Sandy division of the Chesapeake & Ohio system between Louisa and Whitehouse, and it is reported that the work will include an extension to Prestonsburg, a distance of twelve miles. Negotiations have been under way with this in view between parties in Prestonsburg and the Chesapeake & Ohio Company.

Rutherfordton, N. C.—Rutherford county will vote on the question of issuing bonds in aid of the railroad being promoted between Spartanburg, S. C., and Rutherfordton, an estimated distance of thirty-five miles.

Thibodaux, La.—L. H. Lancaster, one of the promoters of the electric railway between Thibodaux, Houma and Donaldsonville, informs the Manufacturers' Record that the entire length, with branches, is estimated at 130 miles. He states that it is expected to let contracts within the next three months.

Union, Mo.—H. F. Balch & Co. of St. Louis have been awarded contracts for the St. Louis, Kansas City & Colorado Railroad for a distance of forty-seven miles. The road is to be built between Union and Kansas City, an estimated distance of 206 miles. Geo. L. Sands of St. Louis is chief engineer.

Washington, N. C.—The railroad under construction between Washington and Plymouth, N. C., has been completed a distance of twenty-eight miles, and it is expected to have train service in operation between these towns by December 1. New Jersey and Norfolk capitalists are interested in the enterprise. E. A. Armstrong of Camden, N. J., is president of the company.

Winnfield, La.—The Shreveport & Red River Valley Railroad Co. has decided to build a branch from the main line to Winnfield, an estimated distance of twenty-eight miles, and has let a contract for grading the extension to Epple & Hayes of Alexandria, La.

## Street Railways.

Beaumont, Texas.—Another company has been organized to build an electric railroad in Beaumont and its suburbs, and has applied for a franchise to the city council. Among those interested are Edward Kennedy and A. C. Rush.

Chattanooga, Tenn.—Work on the extensions and improvements to the Chattanooga Railway Co. are now in progress, and it is expected that it will be completed within the next six months. S. W. Devine is president of the company.

Greensboro, N. C.—The latest report concerning the street-railway system is to the effect that work is to begin on the line in the near future. F. A. Barr has charge of the construction.

## Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Belting.—See "Saws."  
 Belting, etc.—See "Paint Machinery."  
 Boiler.—Mullins (S. C.) Lumber & Brick Co. is in market for 150-horse-power boiler (inspectors' certificate), with year's guarantee.  
 Boilers.—D. W. Alderman & Sons Co., Alcolu, S. C., wants two return tubular boilers of 80 to 125 horse-power, second-hand.  
 Boiler and Engine.—See "Distillery Equipment."  
 Boxes (Paper).—M. F. Robinson, Hagerstown, Md., wants addresses of makers of paper boxes.  
 Box Manufacturers.—H. Kelly, 29 Cortlandt street, New York city, wants to correspond regarding the manufacture of cases from ash and bass wood.  
 Brick Machinery.—Leonard C. Register, Trio, S. C., wants to correspond regarding purchase of brick machinery, lime-kilns and cement machinery.  
 Bricks.—A. P. Weller, St. Petersburg, Fla., wants about 400,000 good bricks loaded on schooners.



Bridge.—F. M. Cannon, chairman committee, Lawrenceburg, Tenn., will open bids October 5 for construction of steel highway bridge at Iron City, Tenn.; three spans, aggregating 324 feet; 100-foot steel approach; 12-foot roadway; stone piers, etc.; \$500 check required from bidders; also will open bids same date for construction of masonry for the bridge. Send for particulars.

Building Materials.—B. B. Pound, Cordele, Ga., will buy tin roofing, marble tiling floors, plate glass and granite for doors and sills.

Building Supplies.—W. C. Hale, Morristown, Tenn., will want hand elevator, roofing, plate glass.

Building Supplies.—A. A. Strauss, Mayesville, S. C., wants addresses of makers of skylight glass.

Cans.—S. H. Collins, Milton, Fla., wants addresses of makers of small tin cans.

Cement Machinery.—See "Brick Machinery."

Cleaning Machinery.—Karl Kethel, Ellenboro, N. C., wants addresses of makers of machinery for cleaning monazite sand.

Conveying Machinery.—L. W. Coyner, Luray, Va., wants prices on conveying machinery for flour mill.

Cotton Gin.—John Sherry, Eufaula, Ala., will want (in December) cotton-gin outfit.

Cotton Gin.—Hicks & Schultz, Marion, Texas, will want four-gin-stand outfit complete.

Distillery Equipment.—W. H. Martin, Gold Hill, N. C., wants to buy 20-horse-power center-crank engine, 20, 25 or 30-horse-power return tubular boiler, 18 or 20-inch vertical corn mill, and copper work for distillation of corn whiskey.

Dry-kiln.—Mullins (S. C.) Lumber & Brick Co. is in market for lumber dry-kiln of 10,000 feet capacity.

Electrical, etc.—National Bureau of Standards, Treasury Department, Washington, D. C., will require engines, dynamos, boilers, pumps, hydraulic elevators, etc., but no bids have been invited. E. B. Roas is acting director.

Electric-light Plant.—See "Water-works."

Electric-light Plant.—Gordon Hicks, secretary water and light commissioners, Tallahassee, Tenn., will open bids September 18 for construction of water-works and electric-light plant, for which \$35,000 has been voted. Work to comprise about 435 tons cast-iron pipe and specials, fifty-two fire hydrants and thirty valves, 75,000-gallon steel tower and tank 120 feet high, 100-kilowatt dynamos, motor, transformers, are lamps, etc.; 750,000-gallon power pump, brick reservoir, two-story brick building, about six and one-half miles of four, six and eight-inch pipe and eleven miles electric transmission line and five miles of distribution. Plans on file with Gordon Hicks, secretary committee; also with Granbery Hicks, engineer, 211 Union street, Nashville.

Electric Wiring, etc.—J. K. Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids September 24 for installation of conduit and wiring system in postoffice building at Carrollton, Ky., in accordance with plans, etc., copies of which may be obtained on application to above-named or to superintendent of construction at Carrollton.

Elevator.—See "Building Supplies."

Elevators.—See "Paint Machinery."

Engine.—A. L. Hair, Turley, I. T., is in market for one or two-horse-power gasoline engine; second-hand will answer.

Engine.—L. W. Coyner, Luray, Va., wants prices on 60 to 80-horse-power Corliss engine, second-hand.

Flour Mill.—Elkins (W. Va.) Milling Co. wants prices on 60-barrel flour mill complete; also plans.

Flour-mill Scales.—See "Scales."

Fuel-oil Apparatus.—Continental Glass Co., 10 South Twenty-first street, Richmond, Va., wants information regarding burning crude kerosene oil.

Glass Works.—Continental Glass Co., 10 South Twenty-first street, Richmond, Va., will be in market for machinery and supplies for glass works.

Grist Mill.—Gerhard Diers, La Grange, Texas, will want grist mill soon.

Grist Mill.—John Sherry, Eufaula, Ala., will want (in December) grist-mill outfit.

Heating Plant.—J. K. Taylor, supervising architect, Washington, D. C., will open bids September 30 for furnishing heating apparatus for postoffice building at Carrollton, Ky., in accordance with plans and specifications, copies of which may be had at Taylor's office or that of superintendent at Carrollton.

Ice Plants.—K. B. Harvey, Punta Gorda,

Fla., wants refrigerators for houses and boats.

Laundry.—J. B. King, Marion, Ala., wants estimates on steam laundry equipment.

Lime-kilns.—See "Brick Machinery."

Logging Equipment.—See "Railway Equipment."

Machine Shop.—Glinners' Machinery Co., Dallas, Texas, is in market for iron-working tools, etc., new or second-hand.

Machine Tools.—Pass City Foundry & Machine Co., El Paso, Texas, is in market for 36-inch improved lathe, punch and shears, 42-inch throat, set rolls and horizontal boring mill.

Machine Tools.—Alabama Consolidated Coal & Iron Co., Birmingham, Ala., is in market for machine lathe, 18-inch swing, 8 feet between centers, and for drill press to work up to 1½ inches, with at least 12-inch clearance from post to drill, second-hand.

Mattress Machinery.—N. E. Whitehurst, Jr., 100 Crawford street, Portsmouth, Va., want information and prices on felt and shuck mattress machinery.

Mining Machinery.—See "Cleaning Machinery."

Monazite Machinery.—See "Cleaning Machinery."

Oil-fuel Apparatus.—L. W. Hammond, 309 West Fourth street, Cincinnati, Ohio, wants full information regarding oil-fuel burning for furnaces.

Paint Machinery.—Florida Paint Co., Jacksonville, Fla., will want paint mills, mixers, shafting, belting, two elevators, etc.

Piping.—E. A. Hitchcock, Secretary of Interior, Washington, D. C., will open bids September 19 for installation of steam and exhaust piping, etc., in buildings. Copies of specifications, etc., on application.

Railroad Equipment.—Kentucky Lumber & Veneer Co., H. Wade Beavers, manager, Jackson, Ky., is in market for railroad supplies (probably for 16-mile line of 36-inch gauge).

Railway Equipment.—See "Tank Cars."

Railway Equipment.—H. L. Murray & Son, Marion, N. C., want narrow-gauge locomotive, 16-pound rails and log trucks, second-hand.

Railway Equipment.—J. E. Matthews, Union, N. C., wants prices on 30 to 35-pound light rails, and on standard locomotive, second-hand.

Roofing.—L. W. Coyner, Luray, Va., wants prices on roofing and siding.

Roofing.—W. H. S. Burgwyn, Weldon, N. C., wants prices on fireproof roofing for warehouse.

Saw-mill.—Kentucky Lumber & Veneer Co., H. Wade Beavers, manager, Jackson, Ky., is in market for band mill, resaws, etc. Saws.—James A. Carmine, Cambridge, Md., will want saws and belting.

Scales.—L. W. Coyner, Luray, Va., wants prices on machine for weighing wheat to rolls.

Screening Equipment.—See "Cleaning Machinery."

Tank Cars.—Tom C. Swope, Threadneedle Court, Beaumont, Texas, wants addresses of builders of tank cars; also wants addresses of parties who will lease tank cars.

Telephone Supplies.—Chesapeake Electric Co., 42 South Charles street, Baltimore, Md., wants prices on crossarms, locust pins, oak brackets, etc.

Trunk-factory Supplies.—Bell Furniture Co., Greensboro, N. C., wants prices on locks, hinges, trimmings, etc., for trunks.

Water-works.—Garrett Water & Light Co., Mountain Lake Park, Md., (address care P. T. Garthright) will probably want electric-light plant and water-works equipments.

Water-works.—See "Electric-light Plant."

Well-drilling.—A. B. Rains, Duck River Oil & Gas Co., Columbia, Tenn., wants to let contract for drilling oil wells.

Well-drilling Machinery.—Chas. C. Anderson, Winchester, Tenn., wants to contract for drilling six oil wells 3000 to 5000 feet deep; also wants to obtain price-lists from supply houses.

Well-drilling Machinery.—J. H. Halle, for Squirrel Creek Oil & Mineral Co., D'Hanis, Texas, wants to correspond with makers of oil-well-drilling apparatus and supplies.

Well-drilling Machinery.—E. C. Noble, Henrietta, Texas, will want machinery for drilling oil wells.

Well-drilling Machinery.—S. B. Trapp, president Moulton Valley Oil Co., Montgomery, Ala., wants to contract for well-drilling machinery.

Woodworking Machinery.—See "Saws."

Woodworking Machinery.—Magnolia (N. C.) Manufacturing Co. wants planer and

matcher, band saw and swing or pendulum saw.

Woodworking Machinery.—Glinners' Machinery Co., Dallas, Texas, is in market for wood-shop machinery, new or second-hand.

Woodworking Machinery.—H. A. Rankin, Atkinson, N. C., wants prices on veneer machines.

## TRADE NOTES.

Important Contract.—The Peck-Hammond Co., Cincinnati, Ohio, has been awarded the contract for the heating, ventilating and sanitary dry closets for the new high-school building being erected at Brookhaven, Miss.

To Machinery Users.—Elsewhere will be found a list of textile and other machinery offered for sale by the Bates Manufacturing Co. of Lewiston, Maine. It includes water-wheels, looms, fans, cones, also metal-working apparatus.

Widely Used.—The Calumet & Hecla Copper Mining Co., the largest copper-mining company in the world, has ten Cross Oil Filters in successful use in its mines. They were furnished by the Burt Manufacturing Co. of Akron, Ohio.

From the South and West.—Recent orders received by the Ball Engine Co. of Erie, Pa., came from the Craddock-Terry Shoe Factory at Lynchburg, Va., and from the Billings Water-Power Co. of Billings, Mont. The last order is for a 250-horse-power engine.

Gone Abroad.—Mr. John Marchioni, superintendent of the mosaic department of the National Mantel & Tile Co., Baltimore, has gone abroad to arrange for the importation of mosaics and other materials, also for new designs pertaining to this branch of the company's business.

For Ice-making.—An excellent opportunity is offered for ice manufacturing in the town of Cleveland, Tenn. Mr. W. M. Cunningham offers for sale a building with an ample water supply. Special inducements are offered to purchase immediately. Further particulars will be found in the advertising columns.

In New Quarters.—The Bunnell Machinery Co. has moved its Chicago offices to Room 144, Monadnock Block, where it will have increased business facilities. This building is one of the largest office buildings in the world, and constitutes a little city by itself. The Bunnell Company is very fortunate in obtaining such quarters.

At the Pan-American.—Among the interesting exhibits at Buffalo is the display of Messrs. J. H. Williams & Co. of Brooklyn, the noted manufacturers of drop forgings. The tools and other specialties produced by this firm are artistically arranged, while an illustration of its extensive plant is one of the conspicuous features of the exhibit.

A Chance for a Business Man.—W. M. Deering of Quincy, Fla., advertises in another column a hardware store and a tin shop in Gadsden county. The business is stated to be prosperous, and the store is the only one of its kind in the county. Mr. Deering will be pleased to give further particulars to those interested.

Saves Much Work.—An axle which can be lubricated without taking off the wheel or nut will be appreciated by all drivers. This is what is claimed for the Council axle manufactured by the B. F. Keith Company of Wilmington, N. C. It is made in various sizes, and seems to fill a long-felt want. Further reference to it will be found in the advertising columns.

Business Exceptionally Good.—In a recent letter the Blakeslee Manufacturing Co. of Birmingham, Ala., writes: "We are making three carload shipments of machinery this week—one to Federal Match Co. of Paterson, N. J., one to Farmers' Manufacturing Co., Norfolk, Va., and one to J. B. Garber & Co. of Laneville, Ala. Business has been exceptionally good with us, and prospects are very bright."

Coaling at Sea.—Mr. Spencer Miller, engineer of the Lidgerwood Manufacturing Co., has sailed for Europe to attend the trials to be made by the British Admiralty of his recent invention, the marine cableway. The requirements of the Admiralty are to transfer forty tons of coal per hour from ship to ship, speeding at ten knots. The apparatus has already been successfully used in the American navy.

Increasing Its Export Trade.—Serrell, White & Cie. of Paris have undertaken the establishment of a number of selling houses

throughout France for the A. S. Cameron Steam Pump Works of New York. An order for a number of service pumps was received this week, this being the second order from the Marseilles district. The local branch of the above concern is Serrell & White at 18 Broadway, New York.

Safety and Durability.—The protection of steel structures, such as roofs and bridges, from the action of the weather and gases is necessary on the ground of safety. The silica graphite paint manufactured by the Joseph Dixon Crucible Co. of Jersey City, N. J., is noted as a preventive of corrosion. It is being used on some of the largest bridges in the United States, among them the bridge across the Ohio river at Louisville, Ky. A recent card issued by the Dixon Company gives an excellent illustration of this bridge.

Forced to Enlarge.—The Phoenix Iron Works Co. of Meadville, Pa., has found its business increasing to such an extent as to necessitate the enlargement of its plant. A contract has been given to the Penn Bridge Co. of Beaver Falls, Pa., for the structural work of a new boiler shop, which will more than double the present capacity. The new shop will be equipped with the most approved modern machinery. The company is also building an addition to its foundry, which will increase its capacity. The engine department is also to be enlarged.

Cool Comfort.—The Cochran Company of Lorain, Ohio, has been making a specialty of refrigerating machinery which can be utilized on a small scale. One of its machines, known as style C, occupies a floor space of only 18x24 inches, yet will make 500 pounds of ice daily or cool a refrigerator containing from 300 to 600 cubic feet of space. The mechanism is strongly constructed, and especially adapted for service in warm climates. It is built in such a manner that it can be carried in sections on pack mules if desired, while it can be operated with safety by a novice. The company will be glad to give further particulars to inquirers.

Extensive Lumber Property.—In another column will be found a reference to a very valuable timber property in the South which is now on the market. It contains over 200,000 acres of long-leaf pine, also a saw-mill plant equipped with the best machinery. Excellent shipping facilities are afforded, including watercourses and a logging railroad. Considerable lumber from the tract has already been exported, and it is very favorably known in the foreign market. Further description will be found in the advertising columns. Messrs. Simpson & Co., Bagdad, Fla., or J. M. W. Hall, No. 53 State street, Boston, Mass., may be addressed.

The Chesapeake & Ohio steamer Rapidan carried from Newport News, Va., to Europe last week a miscellaneous cargo valued at more than \$1,000,000.

The Baltimore Steam Packet Co., it is announced, has solicited bids for another steel vessel for its fleet on the line between Baltimore, Old Point and Norfolk.

There is a well-defined impression at Birmingham that the Tennessee Coal, Iron & Railroad Co. is planning an addition shortly of ten basic-steel furnaces for its plant at Ensley, which will double the capacity of that plant, increasing it to 2000 tons of billets a day.

The William R. Trigg Shipbuilding Co. of Richmond, Va., has been awarded the contract for the hull and propelling machinery of a seagoing dredge for the War Department. The vessel will be 271½ feet long over all, 47½ feet molded beam and 23 feet molded depth. The contract price is \$254,555.

The Missouri, Kansas & Texas Company has begun work upon a system of water-works at Denison, Texas, which will afford a very large supply. A reservoir which will have a capacity of 3,250,000 gallons is to be constructed in connection with pumping machinery. The water will be obtained from a well, which is one of the largest in the United States, bored in the Red river bottom, and will be carried a distance of four miles to the reservoir.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

## Financial Richmond.

The growth of the banking facilities of Richmond has several times been referred to in the Manufacturers' Record, and its importance as a financial center has created considerable comment in the Northern press. In a recent article upon the subject the New York Financier says:

"The extraordinarily rapid growth of the South within the past five or six years makes it plain that a new reserve center is needed to facilitate the business of banking in that section, and some pressure is being brought to bear on Richmond as the proper city for that honor. The compliment is well bestowed. Richmond claims, after Baltimore, to be the predominant financial center of the States south of Mason and Dixon's line, and there is much to substantiate an assertion of this character. There are at the present time five national banks in Richmond, about the same number of State banks which do a commercial business, and eight savings banks, trust companies, etc. The total capital of these institutions on July 15 was \$5,153,672; surplus and profits, \$3,277,582; loans, \$17,061,363; deposits, \$17,248,780, and due other banks, \$2,210,280. Total resources were almost \$40,000,000, a gain of \$3,000,000 since April 26 last. The clearings of the city for the first six months of 1901 were in excess of \$100,000,000, an increase of \$13,000,000 over the same period in 1900. These figures were exceeded by Baltimore, New Orleans and Louisville only among Southern cities. The advantages which the city would enjoy as a reserve center need not be dilated upon at length, for they are already apparent to those who have given the matter attention. Richmond can add to her commercial and financial importance if her banks will take the initiative. The South is the most prosperous section in the United States today, and in the wonderful development that seems certain during the present decade Richmond ought to prove a potential factor. She will count as such in any event, but her progress will be accelerated if she will consent to take her proper position among the recognized financial centers of the Southern States."

## New Corporations.

The American National Insurance Co. has been organized at Fort Worth, Texas, by William H. Moore and others.

The Mutual Building and Loan Association has been organized at St. Francisville, La., with J. B. Thomas, president.

Arrangements have been made to open a bank at St. Joseph, La., by local business men. It will probably be capitalized at \$50,000.

John Carter has been elected president, and H. Shirley, cashier, of the bank recently organized at Liberty, S. C., with \$25,000 capital stock.

The First National Bank is the title of the institution recently organized at Jennings, La., and capitalized at \$50,000. E. F. Rowson is president.

R. S. Wells has been elected president, and E. W. Simpson, cashier, of a private bank recently opened at Elm City, N. C. It is capitalized at \$10,000.

W. H. Powell has been elected president, and L. Ralys, cashier, of the Citizens' Bank, recently organized at Leesville, La. It is capitalized at \$10,000.

A dispatch from Cedartown, Ga., states

that E. C. Benton of Monticello, Ga., is interested in another bank which may be opened at Cedartown in the near future. It will be capitalized at \$25,000.

Arrangements are being made to open a bank at Molena, Ga., capitalized at \$25,000. The bank will be one of the series organized by the Atlanta County Bank Stock Association. W. S. Witham is interested.

J. A. Sheets of Raleigh, N. C., is interested in the Home Mutual Life Insurance Association, recently commissioned in South Carolina with \$10,000 capital stock. The company's principal offices will be in Columbia.

The Security Life & Annuity Co. has begun business at Greensboro, N. C. It will do a general insurance business throughout the State, and has elected J. Van Lindley, president; P. H. Hanes, vice-president, and E. Colwell, general manager.

## New Securities.

The Bank of Napoleonville, La., has purchased the issue of \$12,000 improvement bonds issued by this town.

Messrs. Fulton & Co. of Chicago have purchased an issue of \$10,000 in 5 per cent. bonds of Chickasaw county, Mississippi.

Messrs. W. J. Hayes & Sons of Cleveland, Ohio, have bought the issue of \$60,000 in jail bonds of Caddo parish, Louisiana, at par.

A dispatch from Houston, Texas, announces the issue of \$350,000 in bonds for improvements has been sold at a premium of \$25,000.

The town of Dickson, Tenn., will vote on September 24 on the question of issuing \$35,000 for improvements. The town clerk may be addressed.

Newton county, Texas, will probably issue \$25,000 in 4 per cent. bonds for improvements. The county commissioners may be addressed at Newton.

The city of Martinsburg, W. Va., has disposed of an issue of \$76,000 in 3½ per cent. bonds at a small premium. They refund a similar amount at 5 per cent.

Bids will be received until September 24 for an issue of \$12,000 in 4 per cent. improvement bonds of the town of St. Michaels, Md. G. K. Benson may be addressed.

Messrs. Rudolph Kleybolte & Co. of Cincinnati, Ohio, have purchased the issue of \$75,000 5 per cent. improvement bonds of Greenville, N. C., paying a premium of \$1250.

The Augusta Brewing Co. of Augusta, Ga., has given a mortgage of \$20,000 to secure an issue of 6 per cent. bonds, which will be utilized in refunding a similar amount outstanding.

Rutherford county, North Carolina, will vote October 16 on the question of issuing \$15,000 in bonds for railroad purposes. The county commissioners may be addressed at Rutherfordton.

The Orleans levee board of Louisiana has purchased \$25,000 worth of State bonds for a portion of its proposed sinking fund. The price paid was 107 and a fraction for 4 per cent. securities.

The Atlantic & Gulf Shortline Railroad Co. has filed a mortgage in Georgia in favor of the Knickerbocker Trust Co. of New York to secure a bond issue of \$4,000,000 bearing 5 per cent. interest.

Messrs. W. J. Hayes & Sons of Cleveland, Ohio, and Todd & Co. of the same city have purchased the issue of \$200,000 in 4 per cent. improvement bonds of the city of Nashville, Tenn., paying 102½. Bids were received from five investment firms for the issue.

Since 1898 the assessed value of railroad property in Georgia has increased from \$42,000,000 to \$50,500,000.

## SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending September 10.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	91	93
Aiken Mfg. Co. (S. C.)	90	93
American Spinning Co. (S. C.)	103	103
Anderson Cotton Mills (S. C.)	129	129
Arkwright Mills (S. C.)	117	117
Augusta Factory, (Ga.)	70	73
Avondale Mills (Ala.)	32½	32½
Belton Mills (S. C.)	101½	101½
Bennettsville Mfg. Co. (S. C.)	100	100
Cabarrus Cotton Mills (N. C.)	130	130
Clifton Mfg. Co. (S. C.)	175	175
Clinton Cotton Mills (S. C.)	121	121
Courtenay Mfg. Co. (S. C.)	117	120
Dallas Mfg. Co. (Ala.)	90	100
Darlington Mfg. Co. (S. C.)	96	96
Engle & Phenix Mills (Ga.)	100	100
Enoree Mfg. Co. (S. C.)	112½	116
Enterprise Mfg. Co. (Ga.)	109	109
F. W. Poe Mfg. Co. (S. C.)	116½	116½
Granby Cotton Mills (S. C.)	112	116
Granby Cotton Mills (S. C.) 1st Pfd.	106	106
Grantville Mfg. Co. (S. C.)	160	165
Greenwood Cotton Mills (S. C.)	100	101
Grendel Mills (S. C.)	100	102½
Henderson Cotton Mills (N. C.)	120	125
Henrietta Mills (N. C.)	200	200
John P. King Mfg. Co. (Ga.)	95	100
Langley Mfg. Co. (S. C.)	100	110
Laurens Cotton Mills (S. C.)	139	143
Lockhart Mills (S. C.)	107½	107½
Loray Mills (N. C.)	88	88
Louise Mills (N. C.)	100½	100½
Lynchburg Cotton Mills (Va.)	125	130
Lynchburg Cotton Mills (Va.) Pfd.	145	150
Manchester Cotton Mills (S. C.)	115	115
Mayo Mills (N. C.)	150	150
McColl Mfg. Co. (S. C.)	100	100½
Newberry Cotton Mills (S. C.)	113½	113½
Orr Cotton Mills (S. C.)	102	102
Pacolet Mfg. Co. (S. C.)	180	180
Pelzer Mfg. Co. (S. C.)	172	180
Piedmont Mfg. Co. (S. C.)	143	143
Raleigh Cotton Mills (N. C.)	116	116
Richland Cotton Mills (S. C.)	104	107
Richland Cotton Mills (S. C.) Pfd.	100	104
Roanoke Mills (N. C.)	90	90
Sibley Mfg. Co. (Ga.)	75	78
Southern Cotton Mills (N. C.)	98	100
Spartan Mills (S. C.)	130	133
Trilon Mfg. Co. (Ga.)	125	135
Tucapau Mills (S. C.)	128	128
Union Cotton Mills (S. C.)	148	148
Union Cotton Mills (S. C.) Pfd.	100½	100½
Victor Mfg. Co. (S. C.)	105	105
Warren Mfg. Co. (S. C.)	90	90
Warren Mfg. Co. (S. C.) Pfd.	105	105
Washington Mills (Va.)	100	100
Whitney Mfg. Co. (S. C.)	120	120
Wilmington Cot. Mills (N. C.) Pfd.	100	106
Wiscasset Mills (N. C.)	115	115

The presidents of nearly forty cotton mills live at Charlotte, N. C.

The Chattanooga Pipe & Foundry Co. shipped last week 100 tons of soil pipe to the municipal government of Guadalajara, Mexico.

The Pensacola Journal states that Mr. W. J. Berry has been given a contract for building material for Cuba representing about \$2,000,000.

The Louisville & Nashville shops at New Decatur, Ala., are now working upon orders for 1176 box cars, flat cars and gondolas for the company.

The sales in the Joplin (Mo.) district during the week ended September 7 were 9,152,630 pounds of zinc ore and 1,317,650 pounds of lead ore, valued in all at \$143,577.

## Pennsylvania Railroad Reduced Rates to Indianapolis, Account Sovereign Grand Lodge, I. O. O. F.

For the meeting of the Sovereign Grand Lodge, Independent Order of Odd Fellows, at Indianapolis, September 16 to 21, the Pennsylvania Railroad Co. will sell round-trip tickets to Indianapolis from all points on its lines at rate of a single fare for the round trip. Tickets will be sold September 12 to 15, inclusive, and will be good to return, leaving Indianapolis not earlier than September 15 nor later than September 23. By depositing ticket with joint agent September 15 to 23 and upon payment of fifty cents an extension of the return limit may be secured to leave Indianapolis to October 7, inclusive.

## Pennsylvania Railroad Special Excursions to Pan-American Exposition

The Pennsylvania Railroad Co. will run special excursions to Buffalo on account of the Pan-American Exposition from Baltimore and adjoining territory on September 5, 11, 17 and 26. Round-trip tickets, good going only on special train leaving Baltimore 9.05 A. M. and York 10.43 A. M., and on local trains connecting therewith, and good to return on regular trains within seven days, including day of excursion, will be sold at

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rate of \$10 from Baltimore, and proportionate rates from other points. Tickets will be good for passage in parlor cars and sleeping cars on payment of usual Pullman rates. Stop of thirty minutes will be made at Williamsport for luncheon. For specific time and rates, consult local ticket agents.

## Pennsylvania Railroad Reduced Rates to San Francisco.

On account of the Triennial Convention of the Protestant Episcopal Church, to be held at San Francisco beginning October 2, the Pennsylvania Railroad Co. will sell round-trip tickets to San Francisco from all points on its line at greatly reduced rates.

Tickets will be sold September 18 to 25, inclusive, and will be good to return to leave San Francisco not earlier than October 3, and only on date of excursion by joint agent, to whom a fee of fifty cents must be paid, and passengers must reach original starting point by November 15, 1901.

The Pennsylvania Railroad Co. will also run a personally-conducted tour to the Pacific coast on this occasion by special train, starting September 23 and returning October 22. Round-trip rate, \$185.

For further information apply to ticket agents, or address Geo. W. Boyd, assistant general passenger agent, Philadelphia.



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Bonds of Southern Corporations.

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**SAFE DEPOSIT COMPANY.**

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CHARLOTTE, N. C.

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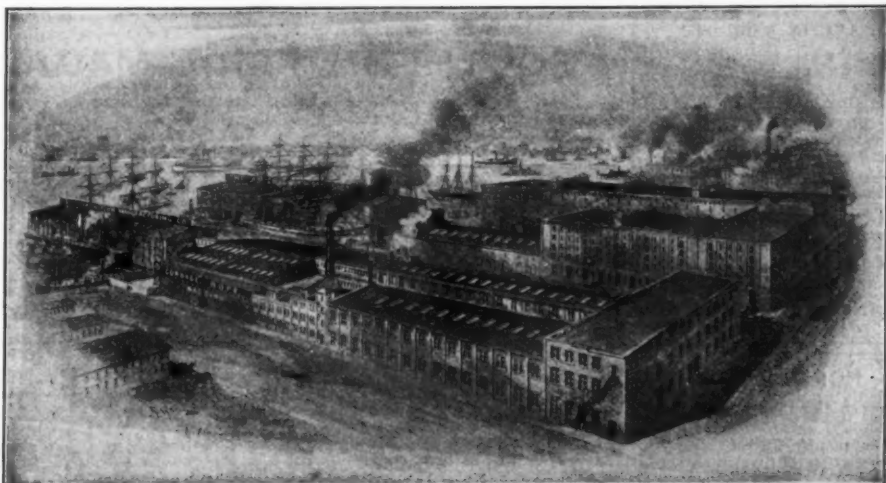
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Advertisements under this head will be inserted at the rate of one cent a word for each insertion.

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**YOUNG, Capable Business Manager**, at present engaged as manager for corporation handling large financial interests, desires change, is open for engagement. Would like to hear from party desiring to relinquish active works to younger hands. Address MANAGER, care Manufacturers' Record.

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MANUFACTURERS,  
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BUFFALO, N. Y.

### PROPOSALS.

**SEALED PROPOSALS.**—Sealed proposals will be received by the Bridge Committee until 2 o'clock P. M. October the 5th, 1901, at the Court House in Lawrenceburg, Lawrence County, Tenn., for the construction of a Steel Highway Bridge across Shoal Creek at Iron City, Tenn., 3 spans aggregating 324 feet, 100 feet steel approach, 12 feet roadway, stone piers. Certified check for \$500 required of bidders. Lawrence County will pay \$2000 cash when bridge is received by Committee. The remainder in one and two years with 5 per cent. interest, reserving the right to pay at any time.

Also at the same time and place sealed bids will be received for the construction of masonry, supposed to be about 300 cubic yards. Plan and specifications of both bridge and masonry on file. The right to reject any or all bids is reserved. F. M. CANNON, Chr. Com., Lawrenceburg, Tenn.

**TREASURY DEPARTMENT**, Office Supervising Architect, Washington, D. C., September 4th, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 24th day of September, 1901, and then opened, for the installation of a Conduit and Wiring System for the U. S. Post Office Building at Carrollton, Ky., in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Carrollton, Ky., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

**TREASURY DEPARTMENT**, Office Supervising Architect, Washington, D. C., September 5th, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 10th day of October, 1901, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Post Office and Court House at ELMIRA, N. Y., in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Elmira, N. Y., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

**TREASURY DEPARTMENT**, Office of the Supervising Architect, Washington, D. C., September 5th, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 30th day of September, 1901, and then opened, for furnishing the heating apparatus complete in place for the U. S. Post Office at Carrollton, Ky., in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Carrollton, Ky., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

### STOCKHOLDERS' COMMITTEE

## The American Cotton Oil Co.

To the Holders of Preferred and Common Stock of the American Cotton Oil Co.:

Holders, to a large amount, of Preferred and Common Stock of the American Cotton Oil Co. have entered into a Stockholders' Agreement (dated July 22, 1901, and filed with the Depositary) for the purpose of furthering a consolidation or other disposition of property of, or the acquisition or lease of property by, the American Cotton Oil Co., and for the advancement of the interests of depositing stockholders through united action, whereby their respective holdings shall be held and managed in bulk during the period of the Agreement, and better results be secured than by individual action.

The undersigned have consented to act as a Committee under said Agreement, and hereby afford holders of the Preferred and Common Stock of the American Cotton Oil Co. the opportunity of participating in the benefits of said Agreement by thereunder depositing their stock with the First National Bank of the City of New York, as Depositary, on or before the 30th day of September, 1901.

Negotiable Certificates of Deposit will be issued for the deposited stock. Copies of the said Stockholders' Agreement may be obtained from the Secretary of the Committee.

Dated New York, August 1, 1901.

GEORGE AUSTIN MORRISON,  
Chairman,  
HARRIS C. FAHNESTOCK,  
EDWARD WINSLOW,  
J. KENNEDY TODD,  
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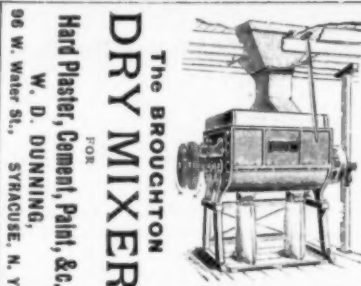
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It will help you to sell Farm and Garden Implements and Machinery, Breeding Stock (Cattle, Horses, Sheep, Swine, Poultry), Stock Remedies, Farm and Stock Appliances and Specialties of every sort, Dairy Supplies, Seeds and Nursery Stock, Fertilizers, Household Articles and everything needed by the farmer or his family.

An advertisement in the Southern Farm Magazine will open up new channels of trade for you. TRY IT!

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## ALPHABETICAL INDEX OF ADVERTISERS.

Ads. marked \* appear every other week. Ads. marked † appear in first issue of the month. Ads. marked ‡ not in this issue.

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			Diamond Machine Co.	1								
			Dibble, S. F., & Co.	56								
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			Dimmick Pipe Co.	49								
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situated in Georgia, Orangeburg Co., S. C., near the South Carolina Road. About half of the tract is adapted for planting purposes, cotton, rice, corn, potatoes, sugar cane and tobacco, balance standing timber, within easy reach of Branchville and Bormantown. Apply to

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55 thousand Acres of Well Timbered Land in Cuba, 32 million feet Red Cedar, 12 million Mahogany, 8 million Mahogany.

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Developed and Undeveloped. Any size or location. Bargains in Southern Properties. Correspondence solicited.

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Additional Capital Supplied.  
Stock Companies Organized and Attractive Properties Financed.  
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11,700 H. P. net, delivered electrically, Camden, S. C., where all trunk lines in South. \$20.00 per H. P. will buy and develop. H. P. rental asked for will pay 6 per cent. on total investment.  
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Unrivalled location for INDUSTRIAL ENTERPRISES  
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Steamboat connection with Norfolk, Va.  
12 hours' travel from New York City.  
Operates Nine Miles of Canals and Electric Power Transmission Plants.

**Price for Water Power:**  
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THIS INCLUDES BUILDING SITE.

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JAS. W. WILSON, President.  
**Magnificent Site for Pulp Mill, &c.**  
On Seaboard Air Line and river navigable 40 miles for light draft boats into a timber country untouched by railroads. Over 200 horse power available.

### To the Manufacturer:

No sites for Cotton and Woollen Mills are more attractive or valuable than those to be found on the

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The water powers are superb; coal for fuel convenient and low in price; the cotton fields almost within sight and sound of the water powers, with low rates on cotton from the various cotton markets to the mill sites (ask for tariffs) and the labor abundant, efficient and cheap. No more healthful region exists in the United States than that penetrated by the system of the Nashville, Chattanooga & St. Louis Railway. The water powers occur on numerous streams on the Huntsville & Sparta Division and on the Western & Atlantic Railroad, and range in dynamic force from 500 to 12,000 horse powers.

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These works have been in operation for more than twenty years, were recently entirely rebuilt and enlarged, and are now prepared to execute all orders for Creosoted Piles and Timber thoroughly impregnated with dead oil of coal tar.  
New cylinders 115 feet long. Capacity one million feet per month. Address

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An arrangement can be made with the owners to look at the timber lands at short notice.

The product of these mills is a very high through-out Germany, South American ports and the United States wherever it is known, which would be of a good deal of value to any one continuing the business.

Application can be made to SIMPSON & CO., Flagstad, Fla., or to J. M. W. HALL, 82 State St., Boston, Mass.

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As administrator, I offer three meritorious inventions for sale, invented and patented by the late John T. Eldridge: (1) Corkscrew; (2) Combination Lock; (3) Locking Stop Cock.

The Corkscrew Patent is especially worthy, and is a decided improvement on anything of the kind now on the market. It will extract corks from any sized bottle without exertion.

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Thorough investigation is invited.  
Specifications and descriptions sent upon request. The Patents will be sold at a sacrifice.

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In Mason County, West Virginia. 1125 acres of land; 500 of Ohio River Bottom and 625 of Hill land. In fine condition. Most desirable location. Ideal place for a home. For particulars address

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160 Acres on main line Chesapeake & Ohio Railroad. Finest quarries in the country. Product suitable for fine fronts, trimmings, steps, flagging, bridges, locks and dams, or any other masonry. Market extensive and inviting. Splendid opportunity for a conservative investment of \$15,000 to \$25,000 capital, yielding large dividends. H. VAN ANTWERP, Mt Sterling, Ky.

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## POWER

At a fuel cost of

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per ten-hour horse-power, be any attraction to you?

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can do even better than that. For particulars, ask the

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Another \$100,000 Cotton Mill is announced for establishment at "CEDARTOWN, GA." This town is rapidly growing as a Textile Centre and new plants are constantly being built here. The product of the latest mill will be fine numbers of hosiery yarn.

Cotton and Knitting Mills, Stove Works, Machine Shops, Basket Factories, Agricultural Implement Works, Stores, Etc., Etc., are offered unexcelled opportunities.

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has Water Works, Electric Light Plant and Underground Sewerage, Churches of all denominations and good Public Schools. For information, write

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At a number of points in the South along  
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There are good openings for Woodworking Plants, such as FURNITURE FACTORIES, PLANING MILLS, SPOKE AND HANDLE FACTORIES, or other plants using pine or hardwoods. Local people will invest from \$6,000 to \$8,000 with an experienced man who will himself invest a like amount or more and do a legitimate business. For information write to

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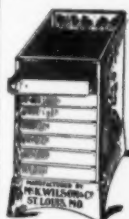
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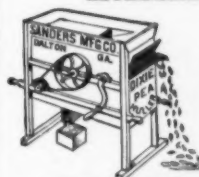
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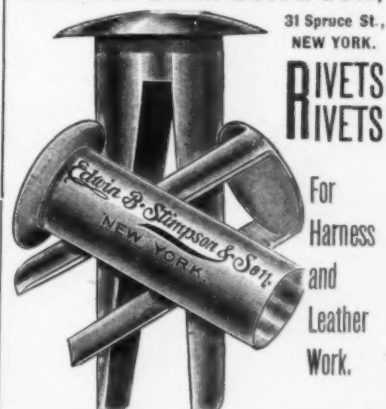
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## Four Locomotives FOR QUICK SALE.

- 1 25-ton Standard Gauge, American type, with air brake; cylinders 14"x22".
- 1 18-ton 30" Gauge Saddle Tank; cylinders 10"x16"; four 36" drivers.
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All in good running order.

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## High Speed Engine Bargains

No.	H. P.	Maker	Cylinders
1	200	Buckeye	16½ x 27
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1	40	A. & S.	8½ x 12
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We have a number of Dynamos and Motors, which we have displaced with larger units. These are all overhauled and guaranteed to be in good working order before shipping. The prices are very moderate indeed.

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Send for our Monthly Bargain Sheet, with lowest net cash prices on machines in stock—Everything Fully Guaranteed. Capital, \$100,000.00 Paid up.

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- LATHES.
- 12 and 20" triple-gear, A1.
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Also large assortment of box monitors, speed and current lathes.

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Also large assortment of other tools. Send for second-hand list.

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10 H. P. White & Middleton.  
Good condition.  
**PRICE, . . . \$300.00.**

- 1 125 light Lundell Dynamo.
- 1 50-light Dynamo.

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Bought and Sold. Write us your wants.

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## Largest Assortment. Immediate Delivery.

- Send for Catalogue.
- 1 30"x60" Greene Engine.
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- 1 17"x30" Williams Automatic Engines.
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- 1 15"x30" Armstrong & Sims Engines.
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- 14 Water Tube Boilers, 15 to 200 lbs. steam pres.
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- Several full Railway Equipments.

Large stock of Machine Tools. Let me know your wants.  
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2 Band Saw Mills, 1 Brick Plant, 1 Endless Rope Mine Haulage Plant, 4 0-ton Shay Geared Locomotives, 18 standard gauge Flat Cars, Boilers, Engines, Rail and Equipment.  
WANTED—Relay Rail, Second-Hand Equipment, Locomotives, Cars, Etc.

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- 2 375 H. P. Sterling water tubes for 150 lbs.
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110, 220, 500-volt motors, from 1 H. P. to 200 H. P.

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Electrical and Steam Machinery,

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- 3 13x5 Blaisdell lathes, elevating rest.
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- 3 14x6 Flather lathes, plain rest.
- 1 14x8 Putnam lathe.
- 1 15x6 Prentice lathe, compound rest.
- 6 15x6 Blaisdell lathes, elevating rest.
- 1 20x8 Putnam lathe, compound rest.
- 1 22x9 New Haven lathe, compound rest.
- 1 30x30x10 Putnam planer.
- 1 36x36x10 Wilson planer, two heads.
- 1 36x36x16 Hughes & Phillips.
- 1 15" Smith & Mills shaper.
- 1 28" Lodge & Davis shaper.
- 4 20" Barnes rd. base, power-feed drills.
- 1 25" Barnes back-gear, power-feed drill.
- 1 26" Prentice back-gear, power-feed drill.
- 1 36" Snyder back-gear, power-feed drill, geared revolving table.
- 1 40" New Haven back-gear, power-feed drill.
- 1 No. 12 Brown & Sharpe miller.
- 4 No. 3½ Garvin plain, back-gear millers.
- 1 No. 15 Garvin plain, back-gear miller.
- 1 five-foot Niles vertical boring mill, 1 head.
- 1 Alligator shear, capacity 1½ round.

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CLEVELAND, OHIO.

## READ THIS!

If you are in the market for a second-hand Boiler and Engine, Steam Pump, Feed-Water Heater, Steam Trap, Dynamos, second-hand Belting, Pulleys, Hangers and Shafting, second-hand Steam Pipe, any size or quantity; Wrought Iron Tanks, Smoke Stacks of any kind, kindly communicate with us, as we are in a position to fit you out, and will guarantee perfect satisfaction or refund the money and bear all expenses

## JOHN HENNING & SON,

1016-20 East Susquehanna Ave., Philadelphia, Pa.

FOR SALE.—Engine, 12x16, \$200. Three Traction Engines, 10 and 12-horse, \$300 each. 10 and 12-horse Portable on wheels, \$200 each. Engine Lathe, 20" swing, \$150. 16" Speed Lathe, Pratt & Whitney, \$60. Pratt & Whitney Drill Press, \$15. Five Boilers, 55"x18", 20 flues 6", \$300 each. Upright Boilers, Engines all sizes. Double Saw Mill, Brownell make, 36' carriage, 3 head blocks, complete, \$350. 35 Engines and Boilers, from 6 to 100-horse, at buyers' prices. D. L. CASEY MACHINE CO., Springfield, Ohio.

## MACHINERY.

### BOILERS—HORIZONTAL.

(Second-hand.)  
No. B-97—36"x8", 25 3/4" tubes. No. B-106—50"x14", 41 1/4" tubes. No. B-96—30"x8", 20 3/4" tubes. No. B-99—40"x10", 32 3/4" tubes. No. B-105—48"x14", 47 3/4" tubes. No. B-109—54"x15", 64 3/4" tubes. No. B-112—60"x12", 46 3/4" & 2 1/2" tubes. No. B-116—60"x6", 28 1/4" tubes (5). No. B-125—72"x5 1/2", 61 1/4" tubes. No. B-102—60"x12", 70 3/4" tubes. No. B-100—44"x10", 38 3/4" tubes. No. B-113—60"x15", 52 1/4" tubes. No. B-114—60"x15", 54 1/4" tubes. No. B-104—48"x12", 54 3/4" tubes. No. B-98—40"x10", 32 3/4" tubes. No. B-94—54"x12", 71 3/4" tubes. No. B-99 1/2—40"x10", 34 3/4" tubes.

### BOILERS—VERTICAL.

(Second-hand.)  
No. B-157—42"x36", 109 2/4" tubes, submerged. No. B-146—30"x35", 42 2/4" tubes. No. B-34—36"x36", 68 2/4" tubes. No. B-149—28"x35", 37 2/4" tubes. No. B-162—28"x35", 37 2/4" tubes. No. B-151—30"x6", 55 2/4" tubes, submerged. No. B-150—30"x8", 50 2/4" tubes, submerged. No. B-160—30"x6", 37 2/4" tubes.

### PORTABLE BOILERS.

(Second-hand.)  
No. B-144—24"x6", 24 2/4" tubes.  
(New.)  
No. B-131—15 H. P., 24 3/4" tubes. No. B-133—18 H. P., 28 3/4" tubes. All second-hand, in good working order.

### ENGINES—HORIZONTAL.

(Second-hand.)  
No. B-1—10"x10", No. B-6—7"x10", No. B-8—7 1/4"x10", No. B-22—9"x15", No. B-27—13"x18", No. B-28—11"x16", No. B-29—7 1/2"x14", No. B-37—12"x20", No. B-40—12"x15", No. B-44—14"x20", No. B-45—5"x6", No. B-46—18"x2", four-valve. No. B-47—4"x8", No. B-2—12"x20", No. B-12—6 1/2"x12", No. B-17—8"x12", No. B-20—10"x12", No. B-16—6"x10", No. B-7—6"x12", No. B-11—8"x12", No. B-21—12"x24", No. B-39—14"x24", No. B-41—7"x10".

### ENGINES—VERTICAL.

(Second-hand.)  
No. B-51—4"x5", No. B-52—3"x5", No. B-53—4 1/4"x7", No. B-57—5"x7", No. B-58—5"x6", No. B-59—8 1/2"x5 1/2", No. B-61—5 1/2"x5 1/2", No. B-67—8"x8", No. B-68—9"x9" (double). No. B-70—9"x9", No. B-64—6"x6".  
(New.)  
No. B-60—3 1/2"x3 1/2", No. B-54—4 1/4"x3 1/4", No. B-55—6"x6", No. B-56—5"x5", No. B-53—7"x7", No. B-49—10"x10". Second-hand engines in good order, and all equipped with usual fixtures.

### ENGINES—GASOLINE.

(New.)  
No. B-89—7 H. P. No. B-90—6 H. P.

### AIR COMPRESSORS.

(Second-hand.)  
No. B-501—5"x5", No. B-504—9 1/2"x9 1/2"x10", No. B-505—9 1/2"x15 1/2"x12", No. B-507—water air compressors (3). No. B-508—water air compressors (2). No. B-509—water air compressors (C). No. B-510—2 1/2"x6 1/2"x6 1/2" (double). No. B-500—8"x16", 12"x12", No. B-502—6 1/2"x5 1/2"x6 1/2". All in good order.  
Write us for any machinery wanted, or if you wish to exchange or sell. To close out the above quickly will make specially low prices for prompt cash.

## C. C. Wormer Machinery Co.

24-40 Shelby Street,  
DETROIT, MICH.

## Engines & Boilers

### FOR SALE.

One practically new 20x60 Harris-Corliss, \$1500.  
One 13x12 Erie-Ball Engine, \$500.  
One 12"x30" Harris-Corliss Engine, \$725.  
One 23"x48" Greene Engine, \$2500.  
One 10"x30" practically new Harris-Corliss, \$600.  
One 26"x48" and one 18"x48" four-valve Engines, \$500 and \$600.  
One 24x48 Wright Engine, \$400.  
Two 150 H. P. Manning Vertical Boilers, 125 lbs., \$500 each.  
One 125 H. P. Horizontal Tubular Boiler, \$300.  
Shafting, Piping, etc.  
**F. H. DAVIS & CO.**  
53 State Street, BOSTON, MASS.

### FOR SALE CHEAP.

## Two First-Class Engines

Fifty (50) Horse Power each. Both in good condition. Manufactured by Talbot & Sons. Each engine on continuous test has shown over seventy-five h. p. For particulars, address  
**RICHMOND MICA CO., 323 S. 9th St., Richmond, Va.**

### SPECIAL GAS ENGINE BARGAINS.

50 H. P. Foss, 38 H. P. White & Middleton, 25 H. P. New Era, 38 H. P. Fairbanks-Morse, 15 H. P. Otto, 12 H. P. Otto, 10 H. P. New Era, 2-12 H. P. Fairbanks-Morse, 15 H. P. Chicago, 12 H. P. Chicago, 2-7 H. P. Chicago, 2-3 H. P. Chicago, 2 6 H. P. Fairbanks-Morse, 2-2 1/2 H. P. Fairbanks-Morse. Engines, all sizes, bought, sold and exchanged. Address  
**A. H. McDONALD, 36 W. Randolph St., CHICAGO.**

### FOR SALE.

Lot of Boilers, Engines, Lathes, Planers, Drill-Presses, 1 Large Fire Pump, Steam Pipe, all sizes, and about 500 Tons of different sizes.

## WILLIAM ECKBOLD'S SONS,

711 E. Girard Ave. PHILADELPHIA, PA.



# Machinery and Supply Bargains.

We are easily the representative machinery house of America. Our stock is the most extensive to be found anywhere.

All rebuilt motive power that leaves our establishment is in absolutely perfect condition. Our extensive repair shops are replete with every modern facility for correctly turning out second-hand machinery, as good as new for further use.

## The Following Items are Offered Subject to Prior Sale:

### No. ENGINES.

104. 2 16x24 slide valve.
109. 2 8x12 side crank.
111. 8x16 right hand, side crank.
112. 8x16 left hand, side crank.
114. 10x14 link motion, right hand.
115. Vertical incased, 10x14, low pressure.
116. Cross compound 3x8x8.
117. 5x12 right hand, side crank.
118. 9x14 left hand, box bed.
119. 8x12 center crank.
120. 9x10 side crank.
121. 8x12 center crank, box bed.
122. 6x12 left hand, side crank.
123. 5x10 right hand, side crank.
001. 6x8x12 center crank, reversible "Tift."
002. 7x8x12 center crank, reversible "Tift."
143. Davy safety engine and boiler, compound, 8x8.
003. 12x20x12 Westinghouse.
150. 5x7 Erie City, center crank.
151. 6x8 Erie City, center crank.
152. 5x7 center crank.
153. 6x8 center crank.
154. 7x10 side crank.
155. 12x24 center crank, heavy bed.
156. 7x12 left hand, slide valve.
157. 9x12 left hand, slide valve.
162. 12x16 left hand and slide valve, extra heavy bed.
163. Armstrong & Sims cross compound 13x4x20x15.
170. 12 H. P. Kimble automatic.
171. 5 H. P. low pressure.
172. 20 H. P. Triple Expan'n "Triumph," nickel plated.
173. 13x4x34 Putnam-Corliss.
190. 15 H. P. Kimble automatic.
192. New York Safety 11x12.
206. 14x24 box bed, slide valve, side crank, right hand.
208. 8x18 right hand, side crank.
210. 11x10 Westinghouse.
212. 11x24 left hand, slide valve.
213. 12x24 slide valve, right hand.
214. 8x7 Westinghouse "Junior."
216. 12x16 box bed, right hand.
217. 15x16 Ball automatic, center crank.
219. 11x20x14 McEwen tandem compound.
047. 22x60 Corliss.
062. 11x20x20 Rice automatic.
060. 13x34 Putnam Corliss.
075. 20x30 Poppet valve.
076. 18x28 Nicol-Burr.
0297. 8x10 Taylor-Beck automatic.
059. 1 pair 18x24 Williams-connected.
0313. 18x32 Nordburg.
0314. 14x18 Erie City side crank.
0318. 13x34 Fitchburg Corliss.
059. 25 brand new Climax aut., from 5 to 25 H. P.
0192. New York Safety, 14x12.
0193. 12x12 Armstrong & Sims.

### No. BOILERS.

660. 75 H. P. Heine safety boiler.
664. 48x12 tubular, no dome.
469. 4 54x15, no dome.
004. 175 H. P. Heine water tube.
005. 120 H. P. Sterling water tube.
006. 54x14, tubular.
675. 48x12 tubular, no dome.
676. 60x12 vertical fire box.
681. 66x12 vertical fire box.
686. 66x16 tubular.
688. 66x18 tubular.
695. 48x10 vertical fire box.
702. 48x10 vertical fire box.
704. 60x16, no dome, tubular.
708. 66x14 tubular.
711. Marine fire box, 15 H. P.
716. 4 72x20 tubular, no dome.
719. 100 H. P. internally fired.
580. 15 H. P. water-tube marine boiler.
580. 20 H. P. water-tube marine boiler.
007. 1 80 H. P. locomotive fire-box boiler.
008. 1 100 H. P. locomotive fire-box boiler.
009. 50 vertical, from 2 to 20 H. P.
010. 20 locomotive fire-box boilers, from 10 to 40 H. P.

### No. PUMPS.

011. Worthington compound duplex, 10x16 by 10x10.
012. Worthington compound duplex, 8 and 14x8x10.

065. 7 deep-well pumps.
- 100 pumps, single, duplex and triplex, belt driven and centrifugal.

Write for our list of pumps; it's a very complete one.

### No. GASOLINE ENGINES.

013. 2 50 H. P. Ottos.
- 10 1 1/2 horse-power.
- 12 2 horse-power.
- 5 3 horse-power.
- 6 4 horse-power.
- 4 5 horse-power.
- 1 8 horse-power.
- 1 10 horse-power.
- 1 20 horse-power.
- 2 25 horse-power.
051. From 3 to 20 H. P. brand new Dayton horizontal.

### No. AIR COMPRESSORS.

064. 25 assorted size air compressors.

### OUR COMPLETE LIST ON APPLICATION.

### No. HEATERS.

014. Baragwanath 76 H. P., brass tubes.
015. Smith-Valle No. 1.
607. 16 inch diameter, 10 feet high.
608. Excelsior 20 inch diameter, 7 feet high.
609. Pressure heater 18 inch by 10 feet.
610. Pressure heater 14x30 inches high.
613. Pressure heater 20x3.
615. Pressure heater 12 inch diameter, 4 1/2 feet high.
621. Excelsior heater 48 inch high by 18 inch diameter.
522. 24x12 brass tubes, 400 H. P.
561. 18x4 1/2.
562. Baragwanath 14 inch x 4 1/2 feet.
564. National, copper flues, 300 H. P.
568. 15x4 1/2.
635. Excelsior heater 21x4 1/2 ft.
571. Baragwanath 75 H. P.
575. 16 inch diameter, 6 feet high, automatic regulator.
577. Stilwell-Bierce & Smith-Valle 48 inch by 9 feet.

### No. TANKS.

614. 20 inch diameter x 12 inch.
490. 30 inch diameter x 42 inch.
508. 30 inch diameter x 5 feet.
509. 30 inch diameter x 54 inch.
510. 48 inch diameter x 7 1/2 feet.
491. 42 inch diameter x 12 feet.
494. 42 inch diameter x 5 feet.
495. 48 inch diameter x 7 1/2 feet.
496. 48 inch diameter x 8 feet.
500. 36 inch diameter x 5 feet.
287. 36 inch diameter, 10 feet long.
591. Square tank 36x21x18.

This list represents about one-tenth the number of tanks we have in stock. Write us your wants.

### No. HOISTS.

016. Standard-gauge locomotive traveling crane, with boiler, self-propelling, 10-ton capacity.
017. Locomotive traveling crane, 5-ton capacity.
018. Double cylinder 8x14, 3 drum.
019. 10x16 double cylinder double drum Mundy.
020. 11x18 double cylinder double drum, Mundy hoist.
021. 2 locomotive fire box, with single drum, single cylinder, hoist attached.
022. Marion steam shovel complete.
023. Single hoisting engine and boiler, Mundy, on wheels, single drum, single cylinder.
024. 2 stationary hoisting engines, single cylinder, single drum.
025. Electric hoist, direct-connected.
026. 20 brand new hoists of various sizes.
027. Double cylinder, single drum electric hoist.
0106. 8x12 Webster, Camp & Lane hoists.

### No. MISCELLANEOUS.

165. One 8-inch shaft.
028. 20 feet of 5 3/16 inch.
029. 80 feet of 4 1-10 inch.
030. 2000 feet of 1 1/4-inch wire cable.
031. 500 feet of 2 1/4-inch cable.

032. 1000 feet of 2 1/4-inch cable.
033. 1000 feet of 1 1/4-inch galvanized guy rope.
594. Flywheel, solid rim, 10 inch. diameter, 10 inch bore, rim 9 inch face.
034. 2 "A" shaped house derricks.
505. 1 round iron kettle 48 inch diameter.
506. 1 steam-jacket kettle 34 inch diameter.
507. 1 steam-jacket kettle 54 inch diameter, 5 feet deep.
512. 1 jacket kettle 54 inch diameter, 4 feet deep.
513. 1 round jacket 58 inch diameter, 48 inch deep.
035. 2 chemical fire engines.
036. 2 Lindgreen chemical fire engines.
037. 300 gate, globe and angle valves, from 10 to 24 inches, screwed and flanged. Write us.
- 2 mechanical firing fronts for 75 H. P. Heine boilers.
048. Rogers 30-ton locomotive.
049. No. 3 Gates crusher.
050. 44 inch x 6 feet 6 inch rattler.
052. 100 steam traps from 4 to 12 inch diameter.
053. Pratt & Whitney double-spindle drill press.
054. Automatic horizontal boring bar.
055. 2 iron planers, 1 18x18x4 and 1 20x20x6.
056. 2 Raymond crushers and pulverizers.
057. 2 Jones water-wheels, one 24 inches and one 30 inches.
070. 2 wire stretchers.
061. 2 Wells lights, large size.
0321. Hotchkiss hammer.
0339. Set of boiler rolls; will take sheets 38 inches wide.
063. 16 Ingersoll-Sergeant rock drills.
- 500,000 feet of standard black wrought-iron pipe, from 1/2 to 12 inch diameter.
- 5 carloads of steel sheets, from 8 to 16 gauge.

All kinds of plumbing material, including bathtubs, lavatories, sinks and closets.

We carry a complete stock of hardware, enclosing such items as horseshoes, horseshoe nails, hammers, hatchets, axes, handles, etc.; also just received 5 carloads of wire nails.

### BRAND NEW RUBBER BELTING.

- 450 feet 18 inch 5 ply.
- 100 feet 20 inch 5 ply.
- 250 feet 22 inch 5 ply.
- 100 feet 24 inch 5 ply.
- 52 feet 34 inch 5 ply.
- 135 feet 20 inch 6 ply.
- 30 feet 24 inch 6 ply.
- 37 feet 16 inch 7 ply.
- 30 feet 20 inch 7 ply.
- 90 feet 24 inch 9 ply.
- 118 feet 14 inch 9 ply.

### SECOND-HAND LEATHER BELTING, DOUBLE THICK.

- 200 feet 16 inch.
- 100 feet 18 inch.
- 200 feet 19 inch.
- 100 feet 20 inch.
- 100 feet 22 inch.
- 100 feet 24 inch.
- 100 feet 28 inch.

Also in stock all kinds of New Leather Belting, Oak Tanned Short Lap, Single and Double, in all widths.

We handle every conceivable kind of a belt, and guarantee to save you money on anything in the line.

### No. ELECTRICAL.

038. 50 light 2000 C. P. Westinghouse arc dynamo.
039. 45 light Schuyler arc dynamo.
040. 30 light Schuyler arc dynamo.
041. Two 50 K. W. compound wound Westinghouse alternators.
042. 50 K. W. single phase Westinghouse alternator.
043. 20 light brush arc machine.
044. 25 H. P. 500 volt railroad motor.
045. 60 K. W. Ft. Wayne alternator.

Also in stock all kinds of weatherproof and rubber-covered wire, telephone supplies, telephones, fan motors, annunciators, arc globes and electrical supplies in general.

### OUR COMPLETE LIST ON APPLICATION.

OUR CATALOGUE No. 239 contains an itemized and complete list of our stock on hand. It is such a book as every up-to-date merchant and mechanic should have in his possession. It is free for the asking.

Five Long Distance Telephones in our Office, all "Yards 827." Telegraphic information by "Western Union" or "Postal" Code.

# Chicago House Wrecking Co.

W. 35th and Iron Streets, CHICAGO.

## FOR SALE.

We own about 2000 tons of  
**60-lb. STEEL RELAYING RAILS**  
 and Angle Splice Bars for same. Will  
 sell in lots to suit buyer, and subject to  
 Hunt & Co.'s inspection. Well located  
 for Southern delivery.

We also handle new or second-hand  
 light-weight Rails.

**ROBINSON & ORR,**  
 419 Wood Street, Pittsburgh, Pa.

## ATTENTION!

**To Eclipse Machine & Boiler Works**

1132-1138 W. 14th Street,

CHICAGO, ILLS.

## ICE MACHINES.

One 75-ton, Vilter.  
 Two 15-ton machines.  
 One 10-ton machine.

## BOILERS.

Vertical, Tubular and Fire-box, all sizes.

## ENGINES.

One 10x15 Buckeye, automatic.  
 One 8x16 Buckeye, automatic.  
 One 11x15 Bay State, slide valve.  
 Two 10x16, slide valve.  
 One 8x12, slide valve.

## PUMPS.

One 10x7x10 Smith-Vaile.  
 One 4x3x3/4 Duplex.  
 One 4x2x3/4 Dean Duplex.  
 One No. 5 Knowles.

## WOODWORKING MACHINERY.

One 24" Buss Machine Works Planer.  
 One 30" 3-roll Perry Sander.  
 One Door Relisher and Wedge Cutter.  
 One 24" Surfacer, incline bed.  
 One Double Spindle Shaper.

Write for prices before purchasing elsewhere.

**MENGEL'S MACHINERY EXCHANGE,**  
 26 East Balderston Street.  
 FOR SALE CHEAP—All sizes STEAM AND  
 GAS ENGINES, 50-H. P. LOCOMOTIVE, 60-  
 H. P. HORIZONTAL, 100, 40, 25, 15, 9 AND  
 4-H. P. VERTICAL BOILERS, 22x30 150-H.  
 P. FARQUHAR PISTON VALVE ENGINE, 5-  
 H. P. VERTICAL ENGINE and BOILER com-  
 bined, 20-H. P. HOISTING ENGINE, OTIS 25-  
 H. P. STEAM ELEVATOR ENGINE, POWER  
 WORM GEARED FACTORY ELEVATOR,  
 TWO REVOLUTION and DRUM CYLINDER  
 PRESSES, JOB PRINTING PRESSES, all sizes  
 and makes; complete STEREOTYPE OUTFIT,  
 42" HOE POWER PAPER CUTTER, Sheridan  
 Extra Heavy Toggle Joint SMASHING PRESS,  
 Lot of TYPE, IMPOSING STONES, STANDS  
 and CASES, large lot of standard makes of  
 PRINTING INKS at 1/4 price, WOODWORKING  
 MACHINERY, SHAFTING, BELTING,  
 PULLEYS and HANGERS. Always positive  
 bargains at MENGEL'S MACHINERY EX-  
 CHANGE, 26 E. Balderston St., near Light.

## FOR SALE.

**Can Ice Making Machinery,**

INSTALLED BY

**YORK MANUFACTURING CO.,**  
 (60 Ton Daily Capacity)

complete with 2 Compound Compressors, 30 ton  
 each. Distilling Tanks, Receivers, Boilers, all  
 Piping, Dynamo and Engine for Electric Light-  
 ing and Driving Travelling Cranes for handling  
 cans. About 1500 cans, used 2 years, and can be  
 bought right, either to be used on premises or  
 removed. For full particulars, address,

**S. T. LUND,**

120 High Street, BOSTON, MASS.

## ROLLING MILLS.

We have purchased the entire plant of the Iron  
 Gate Rolling Mill in Virginia, and will have for  
 sale some first-class second-hand Mill Machinery,  
 including Shears, Trains of Rolls, Engines, Boilers,  
 etc., etc. If you are in the market for any of this  
 equipment, let us know your wants.

**POULTERER & CO.**

410 Bullitt Building, PHILADELPHIA, PA.

## FOR SALE.

2 Gravity Drums, 5' diam.x6'; friction brake both  
 ends; as good as new.  
 1 do. new.  
 1200 feet of 3/4" Wire Cable.  
 2 Dump Cars, nopper bottom; capacity 10 tons;  
 36" gage.  
**WILSON RIDGE IRON CO.,** Randall, Ala.

**FOR SALE OR EXCHANGE—BOILERS,**  
**ENGINES, ETC.** 250-h.p. Bab-  
 cock & Wilcox water tube Boilers. A large as-  
 sortment of tubular and fire-box Boilers, Corliss,  
 Slide Valve and Upright Engines, Single and  
 Duplex Steam Pumps, Feed Water Heaters, etc.  
 Goods constantly listed with us. All goods guar-  
 anteed as represented. Send for stock list and  
 let us know your wants, and we will supply you.  
**H. MOORE CO.,** 2d & Sycamore Sts., Milwaukee, Wis.  
 Steam Fitting and Machine Shop.

Second-Hand  
MACHINERY

For Immediate Delivery.

- 1 36 in.x36 in.x9 ft. Sellers Planer, 1 head.
- 1 36 in.x36 in.x7 ft. Sellers Planer, 1 head.
- 1 30 in.x30 in.x10 ft. P. & W. Planer.
- 1 32 in.x32 in.x10 ft. P. & W. Planer.
- 1 3 Spindle Jones & Lamson Drill Press.
- 1 6 Spindle Nut Tapper, 1/2 in.
- 1 10 in. New Haven Shaper.
- 1 Bement Traverse Shaper, 60 in. table, 14 in. Stroke.
- 1 Bement Traverse Shaper, 72 in. table, 12 in. Stroke.
- 1 No. 1 Brainard Universal Milling Machine.
- 1 No. 4 Lodge & Davis Universal Milling Machine.
- 1 Portable Air Compressor, motor driven.
- 1 No. 7 Long & Allstatter Punch.
- 1 20 in.x21 ft. Johnson Engine Lathe.
- 1 46 in.x24 ft. Engine Lathe.
- 1 48 in.x24 ft. Engine Lathe, triple geared
- 1 14 in.x6 ft. Blaisdell Engine Lathe.
- 1 16 in.x8 ft. Blaisdell Engine Lathe.
- 1 24 in. Gisholt Turret Lathe.
- 1 28 in. Gisholt Turret Lathe. (New.)
- 1 60 in. Heavy Radial Drill, 5 in. spindle.
- 1 42 in. Betts Radial Drill.
- 1 3 in. National Bolt Cutter.

**U. Baird Machinery Co.**

123-125 Water Street,  
 PITTSBURG, PA.

## FOR SALE.

A COMPLETE

LAUNDRY  
OUTFIT

(PRACTICALLY NEW)

CONSISTING OF MACHINERY MADE BY  
 THE COLUMBIA CO.

Suitable for a town of twenty  
 thousand inhabitants.

We are offering a bargain. Send for list.

**R. S. ARMSTRONG & BRO.**  
 ATLANTA, GA.

PARTIAL LIST OF  
SECOND-HAND MACHINERY.

- 2 120-h. p. 60"x18" Tubular Boilers.
- 1 80-h. p. 60"x18" " "
- 1 60-h. p. 60"x18" " "
- 1 100-h. p. 18"x12 Ball Automatic Engine.
- 2 10x12 Worthington Duplex Pumps.
- 2 34 Exhaust Fans.
- 1 60-h. p. 10x12 N. Y. Safety Power Automatic Engine.
- 1 80-h. p. 12x20 Baker Automatic Engine.
- 1 13x10x18 Smith-Vaile Single Pump.
- 1 12-in. Centrifugal Wrecking Pump with Direct Connected Engine.

Also a large number of Smaller Engines, Boilers, Pumps, Heaters, etc.

**RAINIER & WILLIAMS,**  
 63 S. Canal St., CHICAGO, ILL.

## FOR SALE.

One 8-horse power Upright Engine,  
 One 9-horse power Upright Boiler,  
 One 11-horse power Upright Boiler.  
**E. J. CODD CO.,**  
 700 N. Caroline St., Baltimore, Md.

## BIG BARGAINS.

General Electric,  
 three phase, sixty cycle, Inductor Motors

- 1 15-H. P. 110 volt, speed 900, price \$350.00
  - 1 30-H. P. 110 volt, speed 900, price \$550.00
  - 1 75-H. P. 550 volt, speed 600, price \$1100.00
- Chicago delivery, ready to ship. Hundreds of other bargains in stock. **GUARANTEED ELECTRIC CO.**  
 133 S. Clinton St., Chicago.  
 Chas. E. Gregory, President.

## Engine Bargains

- 100 h. p. 12x24 Buckeye Automatic.
- 100 h. p. 12x20 Rice Automatic.
- 150 h. p. 16x24 Fraser & Chalmers Corliss.
- 150 h. p. 14x30 Cummer 4 valve Automatic.
- 250 h. p. 12x22x18 Payne Tandem Cpd. Auto.
- 50 h. p. 12x24 Cooper Slide Valve.
- 50 h. p. 12x18 Slide Valve.
- 14x7x10 Smith-Vaile Fire Pump.
- 200 h. p. Baragwanath Heater.
- 45 h. p. 11x18 Slide Valve.
- 60x16 ft. Tubular Boiler.
- 200 h. p. Stillwell-Bierce Heater.

The above are all in first-class condition and ready for shipment.

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- One Marion Style "A" steam shovel with 1 1/2 yard dipper.
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 Stillwell-Bierce Open Heater. All guar-  
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1 600-light Edison incandescent dynamo.  
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One 18" muck mill, one 18" sheet-bar mill, one squeezer, iron and wooden jib cranes, traveling cranes, rotary shears, hydraulic pumps, floor-plate, buggies, etc.

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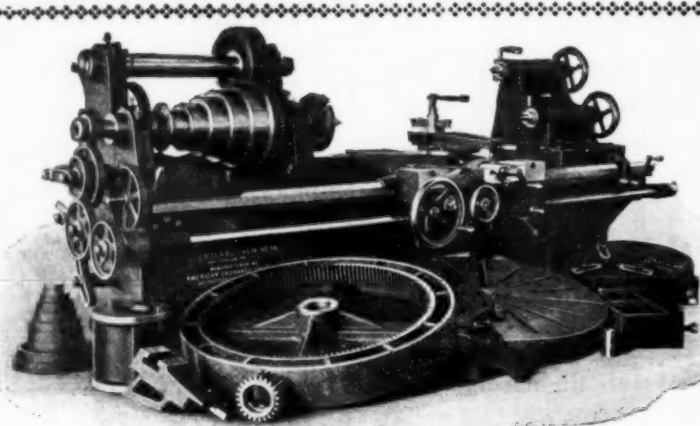
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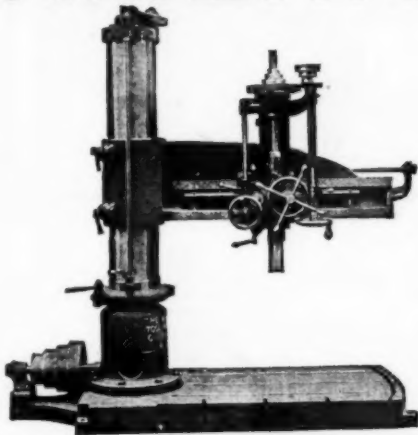


# AMERICAN RADIAL DRILLS

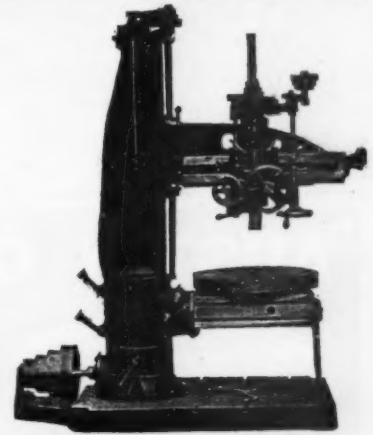
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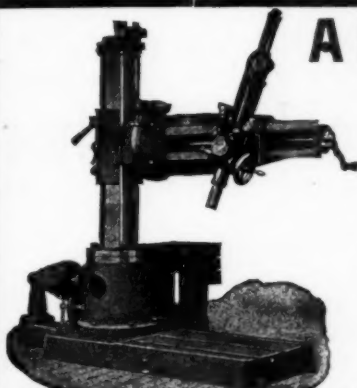
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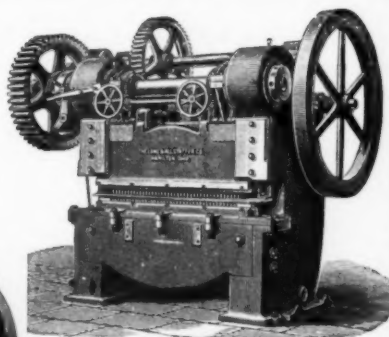
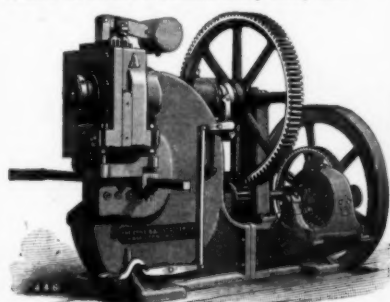
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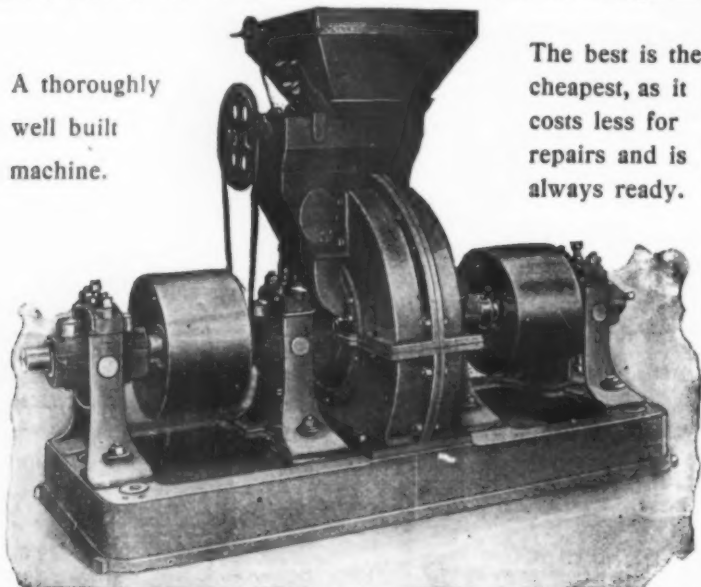
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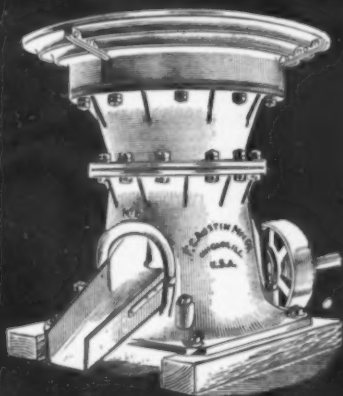


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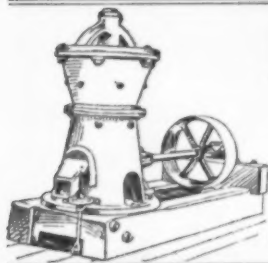
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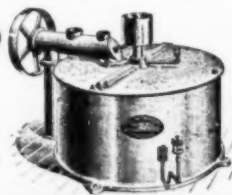
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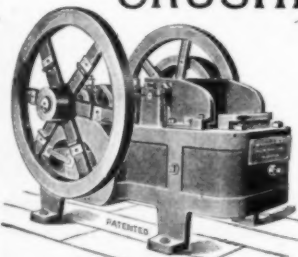
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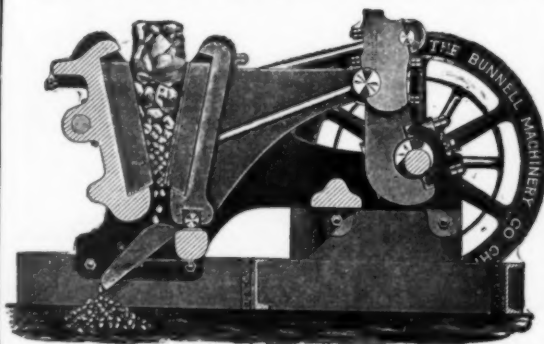
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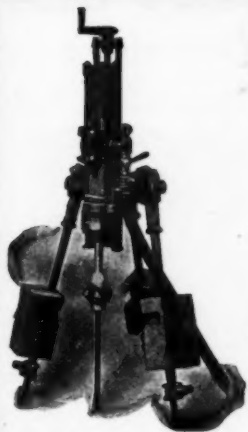
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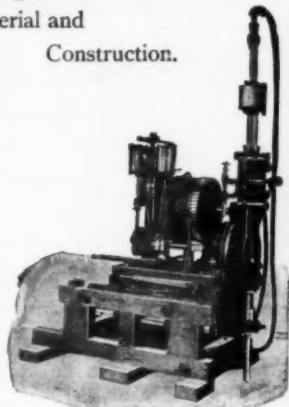
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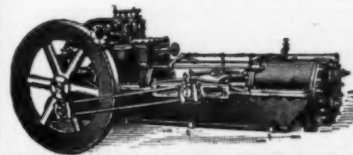
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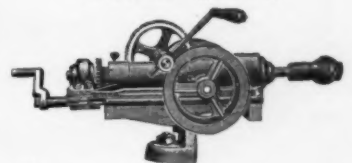
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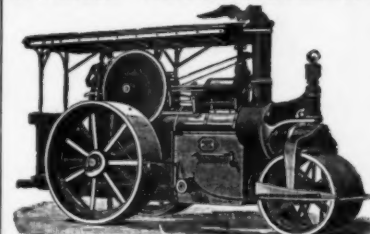
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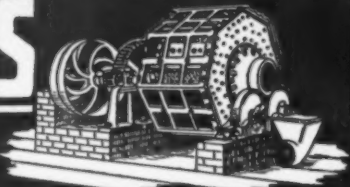
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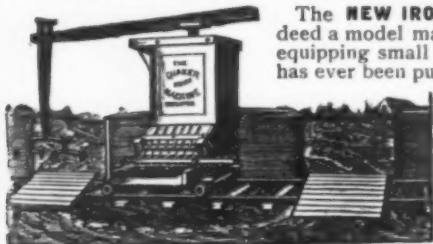
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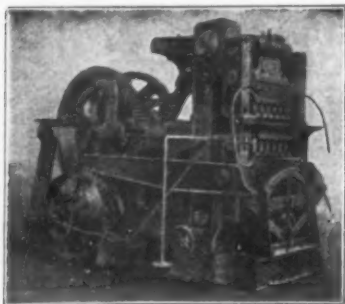


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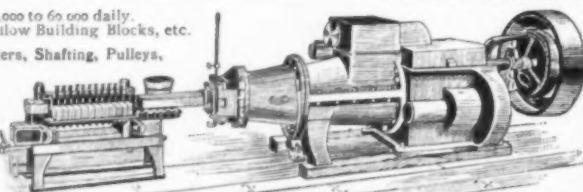
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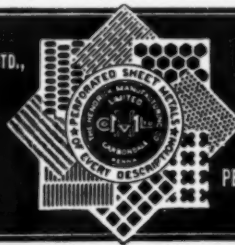
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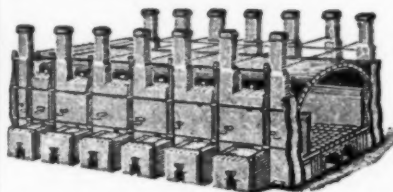
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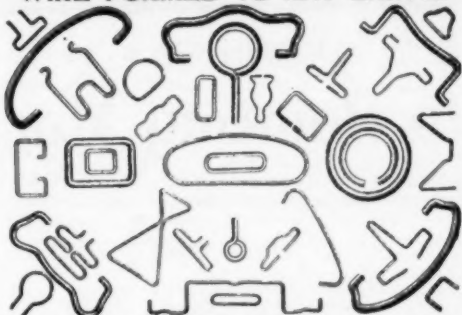
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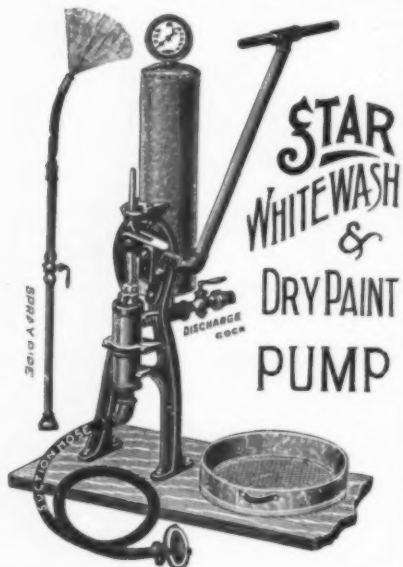
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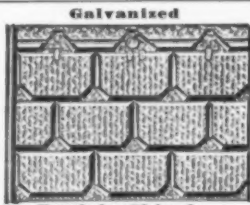


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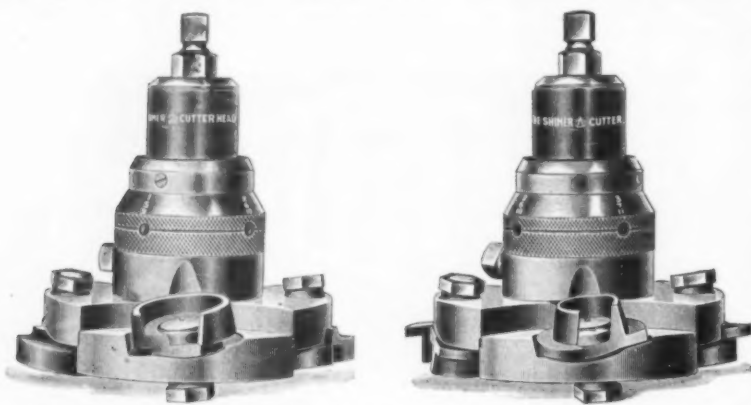
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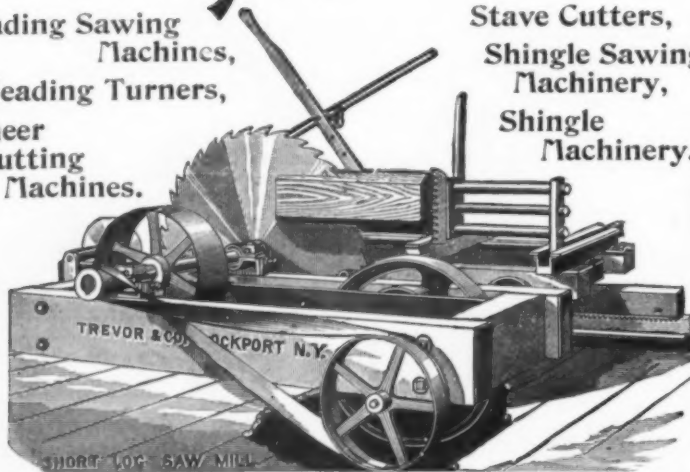
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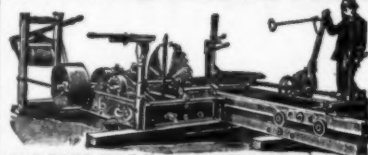
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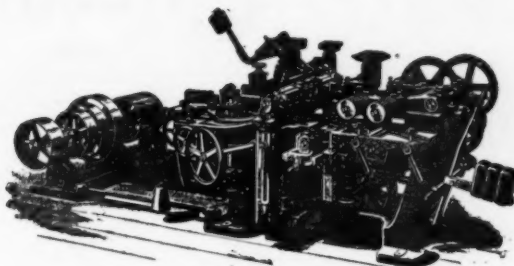
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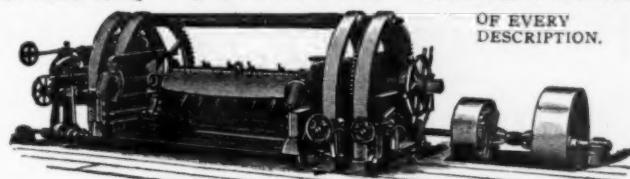
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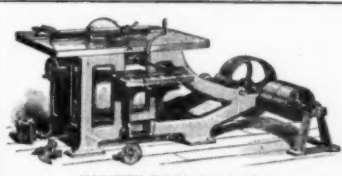
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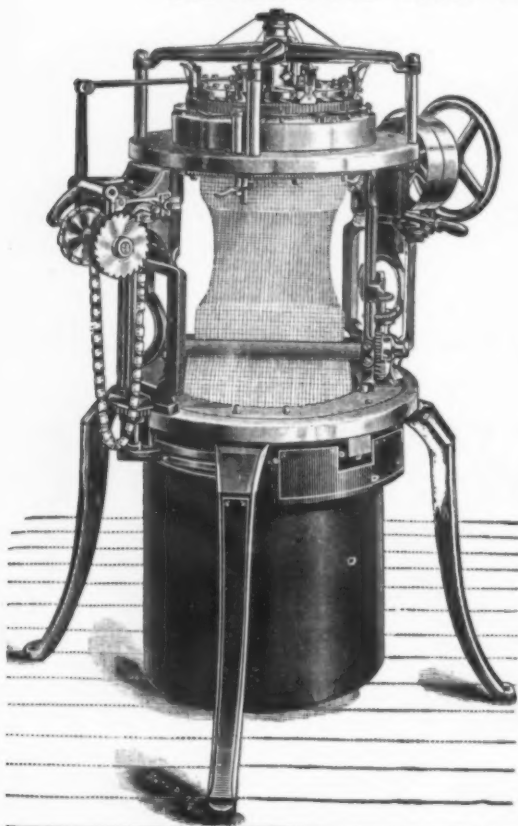
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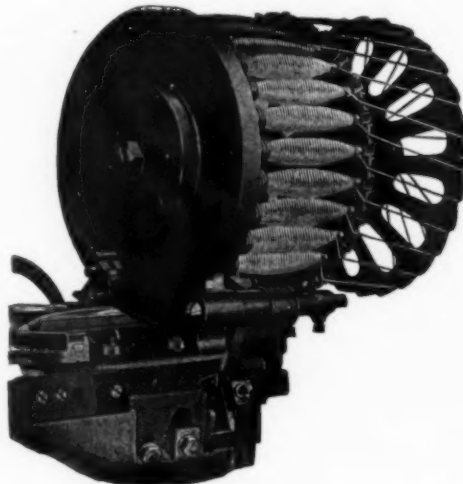


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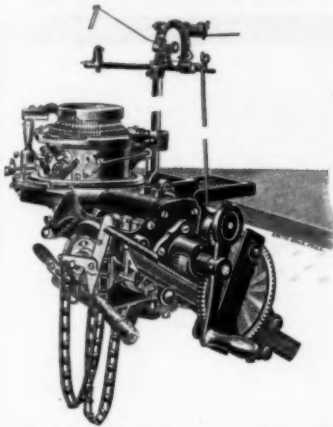
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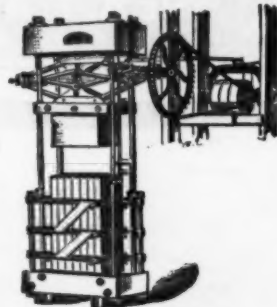
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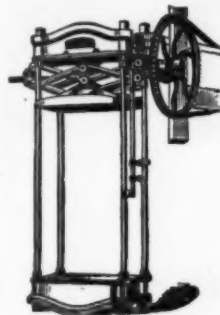
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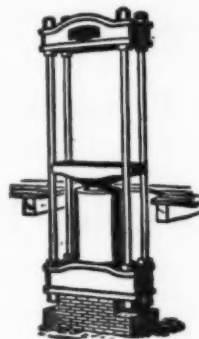
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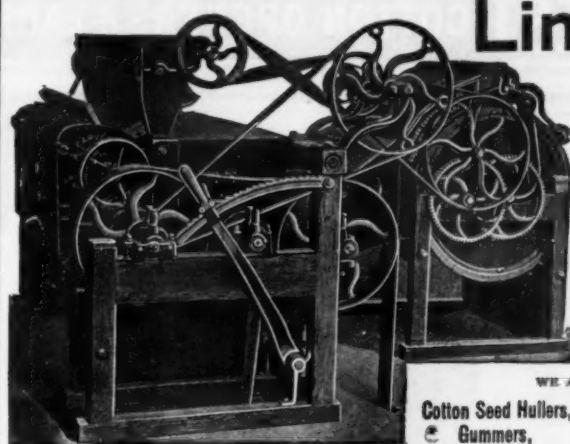
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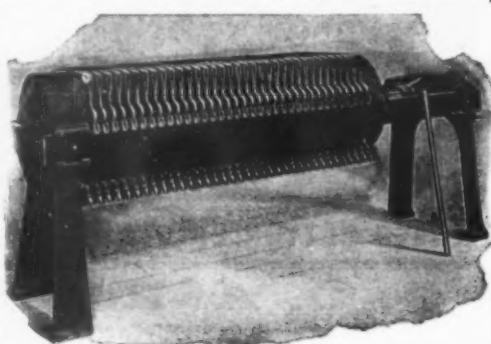
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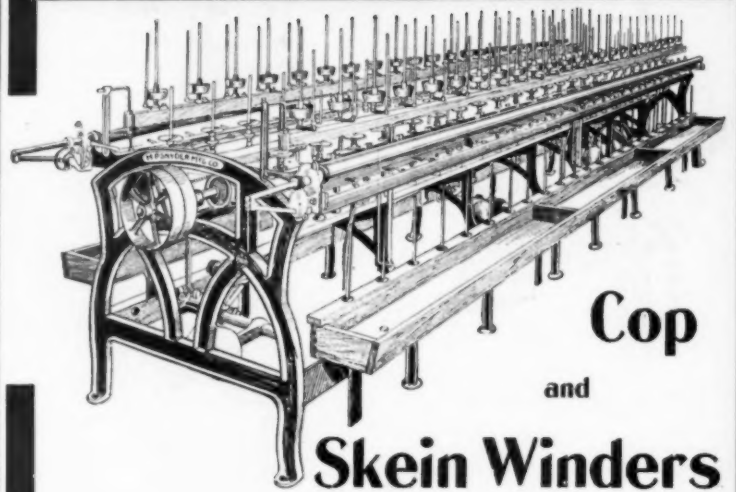
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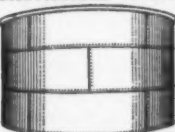
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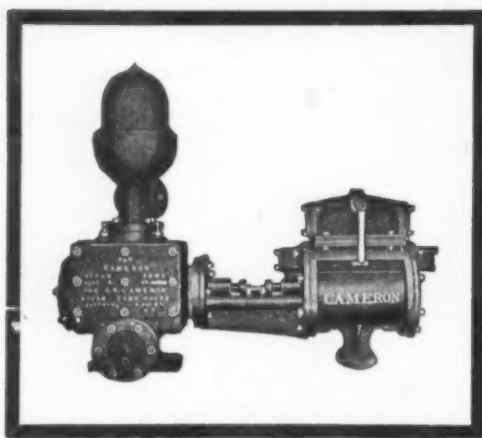
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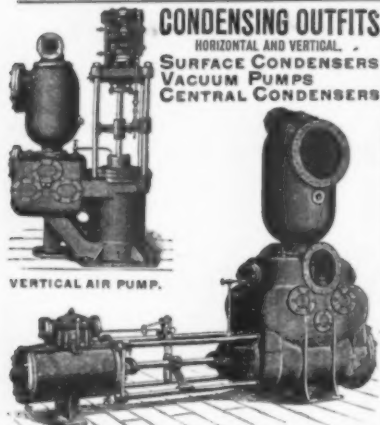
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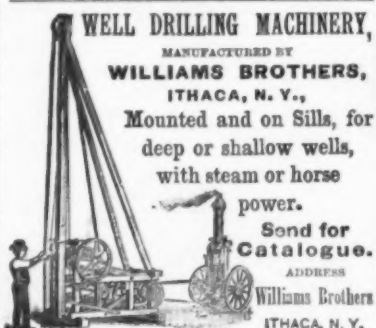


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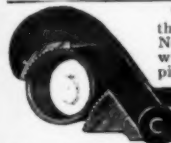
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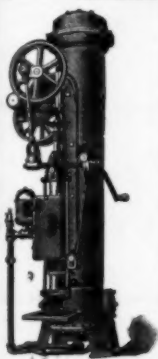
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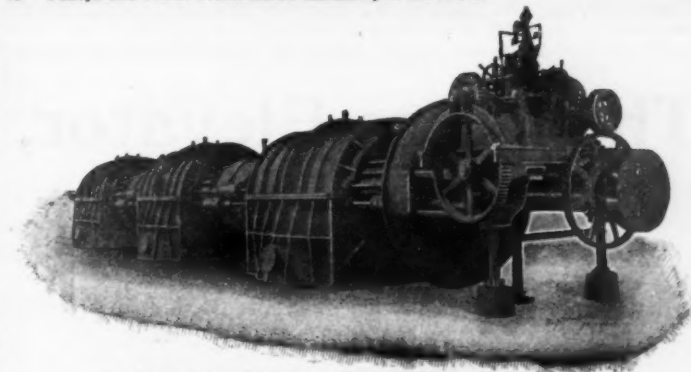
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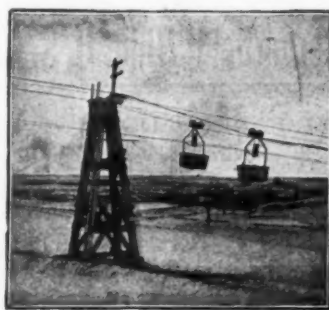
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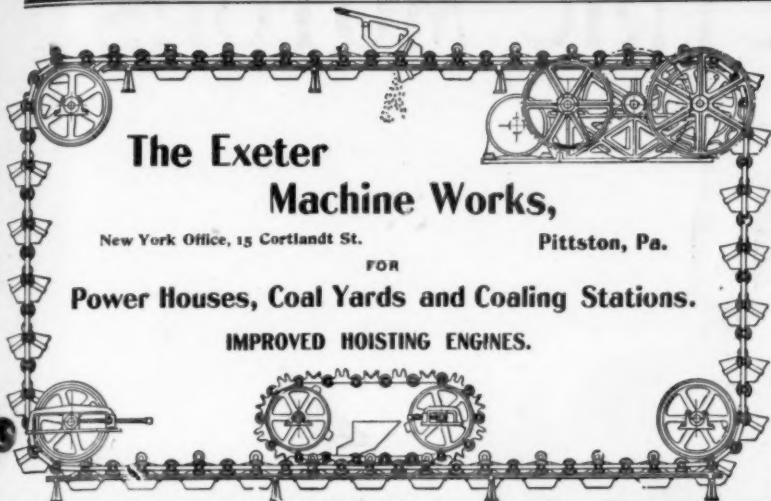
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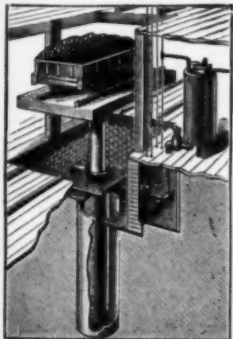
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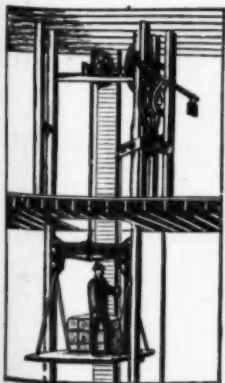
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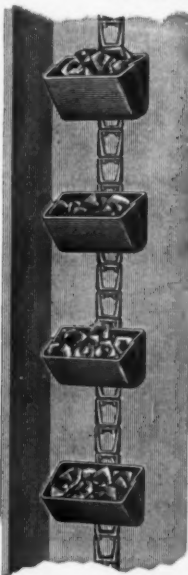
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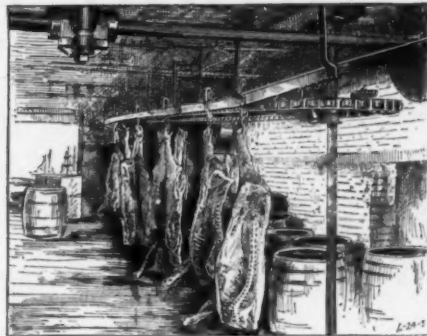
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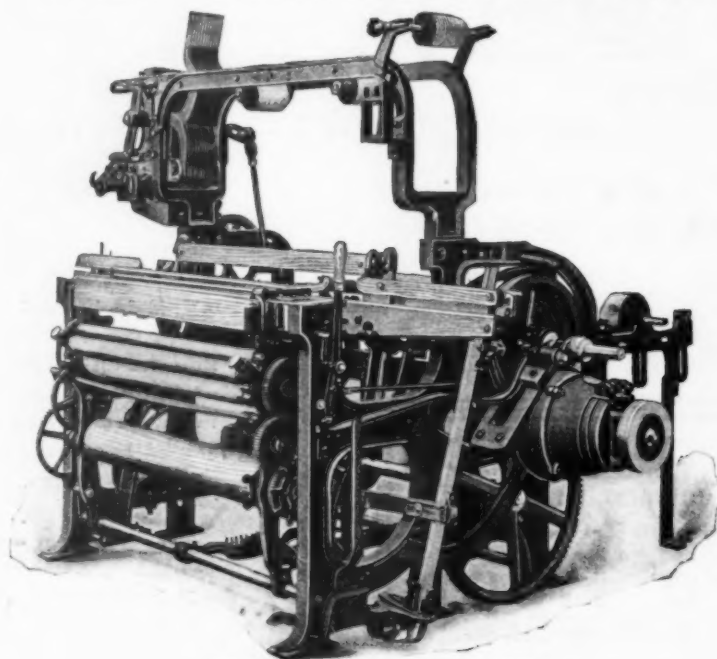
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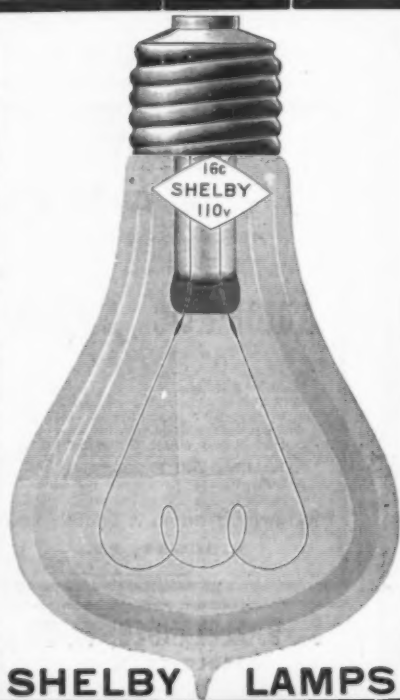
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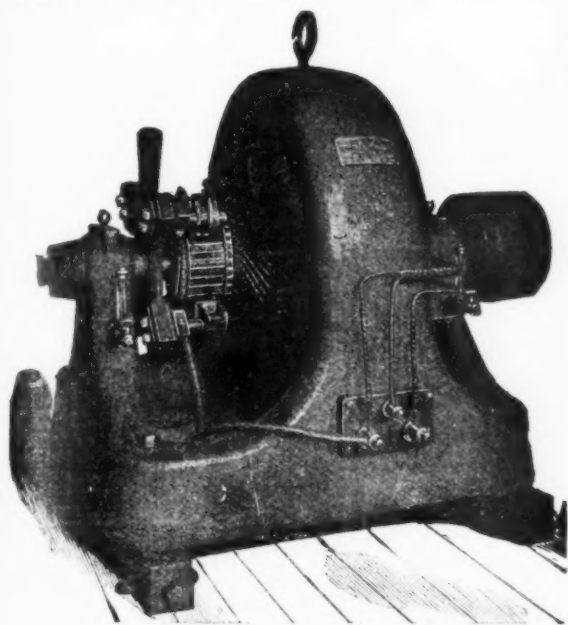
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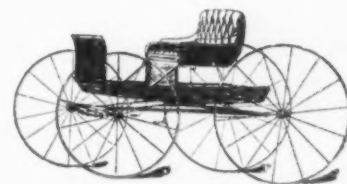
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